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=> fil wpix
FILE 'WPIX' ENTERED AT 15:17:45 ON 12 DEC 2007
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FILE LAST UPDATED:                          7 DEC 2007   <20071207/UP>
MOST RECENT THOMSON SCIENTIFIC UPDATE:     200779      <200779/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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0710.p
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=> d his nofile

     (FILE 'HOME' ENTERED AT 14:19:03 ON 12 DEC 2007)

     FILE 'HCAPLUS' ENTERED AT 14:19:16 ON 12 DEC 2007
L1             1 SEA ABB=ON  PLU=ON  US2007026239/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 14:19:51 ON 12 DEC 2007
L2            11 SEA ABB=ON  PLU=ON  (108-55-4/BI OR 130973-94-3/BI OR
                 37293-51-9/BI OR 52769-51-4/BI OR 7440-22-4/BI OR
                 9001-54-1/BI OR 9001-63-2/BI OR 9001-78-9/BI OR 9001-92-
7
                 /BI OR 9004-54-0/BI OR 9025-70-1/BI)
                 D SCA

     FILE 'HCAPLUS' ENTERED AT 14:26:13 ON 12 DEC 2007
L3               QUE ABB=ON  PLU=ON  FIBER? OR FABRIC# OR FIBRE? OR
                 FIBRA? OR TEXTILE# OR YARN# OR THREAD? OR NONWOVEN? OR
                 FILAMENT?
L4               QUE ABB=ON  PLU=ON  (CROSSLINK? OR CROSS(W)LINK? OR
                 CURING OR NETWORK?)(2A)(AGENT? OR ADDITIVE? OR COMPOUND?
                 OR COMPD# OR CMPD# OR CPD#) OR LINKER? OR CROSSLINKER?
L5         15403 SEA ABB=ON  PLU=ON  L3 AND L4
L6               QUE ABB=ON  PLU=ON  (CHEM? OR COVALENT?)(3A)(ATTACH? OR
                 BIND? OR BOND?)
L7           221 SEA ABB=ON  PLU=ON  L5 AND L6
L8          3630 SEA ABB=ON  PLU=ON  L3(5A)L4
L9            53 SEA ABB=ON  PLU=ON  L7 AND L8
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L10       40284 SEA ABB=ON  PLU=ON  L3(5A)(FUNCTIONAL? OR MODIF? OR
                GROUP?)
L11          20 SEA ABB=ON  PLU=ON  L10 AND L9
L12             QUE ABB=ON  PLU=ON  ENZYME? OR MICROBIAL? OR BIOTIC? OR
                FUNGAL? OR FUNGICID? OR GERMICID? OR ANTIMICROBIAL? OR
                ANTIBIOTIC? OR ANTIFUNGAL? OR ANTIBACTERIAL? OR
ANTIVIRAL
                ?
L13             QUE ABB=ON  PLU=ON  ANTI(W)(MICROBIAL? OR BIOTIC? OR
                FUNG? OR BACTERIAL? OR VIRAL?)
L14           5 SEA ABB=ON  PLU=ON  L11 AND (L12 OR L13)
L15             QUE ABB=ON  PLU=ON  CLEAVAG?
L16           0 SEA ABB=ON  PLU=ON  L11 AND L15
L17          20 SEA ABB=ON  PLU=ON  L11 OR L14
L18             QUE ABB=ON  PLU=ON  (TEXTIL? OR FIBER?)/SC,SX
L19          14 SEA ABB=ON  PLU=ON  L17 AND L18

     FILE 'WPIX' ENTERED AT 14:57:01 ON 12 DEC 2007
L20           1 SEA ABB=ON  PLU=ON  US20070026239/PN
                D IFULL
L21       10917 SEA ABB=ON  PLU=ON  L3 AND L4
L22         354 SEA ABB=ON  PLU=ON  L21 AND L6
L23          37 SEA ABB=ON  PLU=ON  L22 AND L8
L24          15 SEA ABB=ON  PLU=ON  L23 AND L10
L25           5 SEA ABB=ON  PLU=ON  L24 AND (L12 OR L13)
L26           1 SEA ABB=ON  PLU=ON  L24 AND L15
L27          15 SEA ABB=ON  PLU=ON  (L24 OR L25 OR L26)
L28           4 SEA ABB=ON  PLU=ON  L27 AND D06M?/IPC
L29          11 SEA ABB=ON  PLU=ON  L27 NOT L28
L30          15 SEA ABB=ON  PLU=ON  L28 OR L29

     FILE 'COMPENDEX' ENTERED AT 15:07:33 ON 12 DEC 2007
L31         904 SEA ABB=ON  PLU=ON  L3 AND L4
L32          49 SEA ABB=ON  PLU=ON  L31 AND L6
L33           8 SEA ABB=ON  PLU=ON  L32 AND L8
L34           1 SEA ABB=ON  PLU=ON  L33 AND L10
L35           2 SEA ABB=ON  PLU=ON  (L33 OR L34) AND (L12 OR L13)
L36           0 SEA ABB=ON  PLU=ON  (L33 OR L34) AND L15
L37           2 SEA ABB=ON  PLU=ON  L34 OR L35

     FILE 'JAPIO' ENTERED AT 15:11:17 ON 12 DEC 2007
L38        2421 SEA ABB=ON  PLU=ON  L3 AND L4
L39          14 SEA ABB=ON  PLU=ON  L38 AND L6
L40           0 SEA ABB=ON  PLU=ON  L39 AND L8
L41           2 SEA ABB=ON  PLU=ON  L39 AND (L12 OR L13)
L42           0 SEA ABB=ON  PLU=ON  L39 AND L15
                D SCA L41

     FILE 'TEXTILETECH' ENTERED AT 15:12:19 ON 12 DEC 2007
L43        1035 SEA ABB=ON  PLU=ON  L3 AND L4
L44          32 SEA ABB=ON  PLU=ON  L43 AND L6
L45           5 SEA ABB=ON  PLU=ON  L44 AND L8
L46           3 SEA ABB=ON  PLU=ON  L45 AND L10
L47           0 SEA ABB=ON  PLU=ON  L46 AND (L12 OR L13)
L48           0 SEA ABB=ON  PLU=ON  L46 AND L15

     FILE 'WTEXTILES' ENTERED AT 15:14:10 ON 12 DEC 2007
L49        2567 SEA ABB=ON  PLU=ON  L3 AND L4
L50          54 SEA ABB=ON  PLU=ON  L49 AND L6
L51           4 SEA ABB=ON  PLU=ON  L50 AND L8
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L52           1 SEA ABB=ON  PLU=ON  L51 AND L10

     FILE 'JAPIO' ENTERED AT 15:15:10 ON 12 DEC 2007
L53           2 SEA ABB=ON  PLU=ON  L39 AND L10
L54           4 SEA ABB=ON  PLU=ON  L41 OR L53

     FILE 'WPIX' ENTERED AT 15:15:38 ON 12 DEC 2007
                SEL L30 PN,AP

     FILE 'HCAPLUS' ENTERED AT 15:15:50 ON 12 DEC 2007
L55          17 SEA ABB=ON  PLU=ON  (WO1998-IL329/AP OR WO2005-EP992/AP

L56          13 SEA ABB=ON  PLU=ON  L19 NOT L55

     FILE 'HCAPLUS, COMPENDEX, JAPIO, TEXTILETECH, WTEXTILES' ENTERED AT
     15:16:49 ON 12 DEC 2007
L57          23 DUP REM L56 L37 L54 L46 L52 (0 DUPLICATES REMOVED)




=> d l30 ifull 1-15

L30  ANSWER 1 OF 15  WPIX COPYRIGHT 2007       THE THOMSON CORP on STN
ACCESSION NUMBER:     2006-708935 [73]   WPIX
DOC. NO. CPI:         C2006-215822 [73]
DOC. NO. NON-CPI:     N2006-558037 [73]
TITLE:                Forming porous scaffold for use in e.g. tissue
                      engineering, comprises entangling fibers
                      including polyelectrolytes that form a complex and
                      a cross-linker that links
                      polyelectrolytes within individual fibers
                      , by application of fluid
DERWENT CLASS:        A96; B04; D16; D22; F07; P34
INVENTOR:             WAN A C A; YING J Y
PATENT ASSIGNEE:      (SCTE-N) AGENCY SCI TECHNOLOGY & RES
COUNTRY COUNT:        109

PATENT INFORMATION:

      PATENT NO      KIND DATE     WEEK     LA  PG          MAIN IPC
      ------------------------------------------------------------------
      WO 2006101453   A1 20060928 (200673)* EN  34[6]

APPLICATION DETAILS:

      PATENT NO      KIND                  APPLICATION    DATE
      ------------------------------------------------------------------
      WO 2006101453 A1                     WO 2005-SG198 20050620

PRIORITY APPLN. INFO: US 2005-663872P      20050322
INT. PATENT CLASSIF.:
   IPC ORIGINAL:      A61L0027-00 [I,C]; A61L0027-34 [I,A]; A61L0027-38
                      [I,A]; A61L0027-56 [I,A]
BASIC ABSTRACT:
      WO 2006101453 A1   UPAB: 20061113
      NOVELTY - Forming a porous scaffold comprises: (a) providing
      fibers including polyelectrolytes that form a polyelectrolyte
      complex, and a cross- linker that links the polyelectrolytes
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within individual fibers to inhibit secondary polyelectrolyte complexation between adjacent fibers; and
(b) applying a fluid (e.g. water) to entangle the fibers to form a porous structure.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a scaffold formed by the new method.
USE - To form a porous scaffold (claimed) useful in tissue engineering, three-dimensional (3-D) cell culturing, and in 3-D cell culture system for high-throughput drug screening, drug-releasing fabrics and containers for expansion of cells such as stem cells.
ADVANTAGE - The porous scaffold is formed without excessive heating or use of chemical binders, and the porosity and pore sizes of the scaffold can be conveniently controlled. It is not necessary to subject the scaffold material to freezing, heating, or toxic chemical treatment during the scaffold formation process. The formation process conveniently removes impurities and other undesirable substances, such as molecules of low molecular weight, from the fibers by using fluid such as water while the fibers are entangled to form the scaffold. The process can easily form scaffolds having different regional properties and characteristics by entangling different fibers together.
TECHNOLOGY FOCUS:
INORGANIC CHEMISTRY - Preferred Method: The cross-linker comprises silicon, and links the polyelectrolytes through silicon-oxygen bonds.
ORGANIC CHEMISTRY - Preferred Method: The cross-linker is selected from acrylates, succinimides, carbodimides and quinones.
POLYMERS - Preferred Method: The cross-linker comprises silica. The polyelectrolytes are selected from alginate, chitosan, chitin, heparin, chondroitin sulfate, hyaluronic acid, DNA, RNA, polyornithic acid, polyacrylic acid, polyethyleneimine, gellan, carboxylated polymer, aminated polymer, chitosan derivative, chitin derivative, acrylate polymer, nucleic acid, histone protein, acidic polysaccharide, derivative of acidic polysaccharide, poly-aminoacid, poly-lysine and polyglutamic acid. The polyelectrolyte complex is selected from alginate-chitosan (preferred), heparin-chitosan, chondroitin sulfate-chitin, hyaluronic acid-chitosan, DNA-chitin, RNA-chitin, poly(glutamic acid)-poly(ornithic acid), polyacrylic acid-poly(lysine), and poly(ethyleneimine)-gellan complexes. The fibers are formed from a polyanion solution and a polycation solution by interfacial polyelectrolyte complexation. The polyanion solution comprises alginate. The polyanion and polycation solutions comprises at least one of the cross-linker and a precursor of the cross-linker. The precursor comprises hydrolyzed tetraethyl orthosilicate (TEOS). The polycation solution comprises chitosan. The polycation solution comprises chitosan and TEOS, the weight ratio of the chitosan and TEOS being between 8:0 and 1:19, preferably 8:3.7 to 1:9.4. Providing fibers comprises bring the polyanion and polycation solutions into contact to form an interfacial region, and drawing the fibres from the interfacial region. The interfacial region comprises chitosan and alginate with a weight ratio from 8:1 to 1:16. The fibers further comprise a modifier for modifying a property of the fibers. The modifier comprises a surface-modifying substance.

The modifier comprises at least one of a protein and a peptide. The modifier comprises at least one of polyethylene glycol (PEG), collagen, and a peptide with an arginine-glycine-aspartate (RGD) motif. The fibers are confined in a die during the step of applying a fluid so that the porous structure has an external profile substantially conforming to an inner surface of the die. The fluid is water.

FILE SEGMENT: CPI; GMPI

L30 ANSWER 2 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2006-645848 [67] WPIX
CROSS REFERENCE: 2005-210174
DOC. NO. CPI: C2006-198313 [67]
TITLE: Textile material for encapsulating odors in medical textiles, e.g. hospital gowns and sheets, is formed by dipping textile material into water bath containing odor-encapsulating cyclodextrin and imidazolidone cross-linking agent
DERWENT CLASS: A96; B07; C07; D22; F06
INVENTOR: BROWN D A; TODD D E
PATENT ASSIGNEE: (DANR-C) DAN RIVER INC
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 7109324	B1	20060919	(200667)*	EN	10[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 7109324 B1	CIP of	US 2003-427428	20030430
US 7109324 B1		US 2005-52332	20050207

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
US 7109324	B1	CIP of	US 6861520	B

PRIORITY APPLN. INFO: US 2005-52332 20050207
US 2003-427428 20030430
INT. PATENT CLASSIF.:
IPC ORIGINAL: C08B0013-00 [I,A]; C08B0013-00 [I,C]; C08B0037-00 [I,C]; C08B0037-08 [I,A]; C08B0037-16 [I,A]

BASIC ABSTRACT:
US 7109324 B1 UPAB: 20061018
NOVELTY - A textile material is formed by providing odor-encapsulating cyclodextrin and imidazolidone cross-linking agent in water bath; dipping the textile material into the water bath; removing textile material from water bath; and heating the textile material in an oven at 320degreesF for about 2 minutes. The cyclodextrin is cross-linked with imidazolidone by forming an ether bond between the imidazolidone and a hydroxyl group on cyclodextrin. The imidazolidone is cross-linked with the cellulose

in the textile material by forming ether bond between the imidazolidone and a hydroxyl group on cellulose.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a fabric comprising cellulose, imidazolidone cross-linked with an ether bond to hydroxyl group on cellulose; and cyclodextrin cross-linked to imidazolidone with ether bond between the imidazolidone and a hydroxyl group on cyclodextrin.

USE - The textile material, e.g. fabric, is used to encapsulate odors in medical textiles e.g. bandages, hospital gowns and sheets. It is also used in home furnishings including mattress pads, towels, carpets, drapes and upholstery; and in personal care products such as feminine hygiene products, incontinence products, diapers and other fluid-absorbent pads. The fabric can be used to make all or a portion of a textile article. The textile article is used for controlled delivery of drugs and other biological molecules from the cyclodextrin to a localized area.

ADVANTAGE - Because cyclodextrin is chemically cross-linked with the fabric by a strong ether bond, the attached cyclodextrin, and its odor-encapsulating capability, is durable and resists being removed from the fabric during washing. The strength of the ether bonds and the chemical configuration of cyclodextrin allow odor-causing compounds trapped in the cyclodextrin ring to be removed during washing without removing the cyclodextrin from the fabric. Through stable ether bonds cross-linking cyclodextrin to a textile fabric, cyclodextrin is immobilized in a uniform manner throughout the fabric thickness. That is, cyclodextrin is immobilized on both sides of the fabric and to yarn fibers in the space between the two sides of the fabric. As such, distribution of cyclodextrin in a fabric is thorough and uniform, thus enhancing the odor-encapsulating effectiveness of the treated fabric.

TECHNOLOGY FOCUS:

ORGANIC CHEMISTRY - Preferred Component: The cyclodextrin comprises an alpha-cyclodextrin, beta-cyclodextrin, gamma-cyclodextrin, methyl-substituted cyclodextrin, ethyl-substituted cyclodextrin, hydroxyalkyl-substituted cyclodextrin, branched cyclodextrin, anionic cyclodextrin, cationic cyclodextrin, quat. ammonium cyclodextrin, and/or amphoteric cyclodextrin. The fabric further comprises a compound complexed with the cyclodextrin for release. The compound is an antimicrobial agent, a perfume, an odor-mitigating chemical, or an insecticide. The imidazolidone is cross-linked with an ether bond to a hydroxyl group on the fabric and the imidazolidone is cross-linked with an ether bond to a hydroxyl group on the cyclodextrin.

TEXTILES AND PAPER - Preferred Component: The textile material comprises an article of clothing adapted to trap odors emanating from a wearer.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A03-A00A; A03-A05A; A08-D04; A10-E08C; A11-C02; A12-S05T; B04-C02A; B04-C02B1; B07-D09; B12-M02D; B12-M10; C04-C02A; C04-C02B1; C07-D09; C12-M02D; C12-M10; D09-A; D09-B05; D09-C04B; D09-C06; F03-C09

L30 ANSWER 3 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2006-280390 [29] WPIX
DOC. NO. CPI: C2006-091596 [29]

TITLE: Photocatalytic material for environmental purification, consists of modified molecule fixed to outer wall of hollow fiber through linker portion of modified molecule

DERWENT CLASS: J04

INVENTOR: MIYAUCHI M; TOKUTOME H

PATENT ASSIGNEE: (TTOC-C) TOTO LTD

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2006102587	A	20060420	(200629)*	JA	14[6]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2006102587	A	JP 2004-290023	20041001

PRIORITY APPLN. INFO: JP 2004-290023 20041001

INT. PATENT CLASSIF.:

IPC ORIGINAL: B01D0053-86 [I,A]; B01D0053-86 [I,C]; B01J0031-02 [I,A]; B01J0031-02 [I,C]; B01J0035-00 [I,C]; B01J0035-02 [I,A]; B01J0035-06 [I,A]

BASIC ABSTRACT:

JP 2006102587 A UPAB: 20060505

NOVELTY - The photocatalytic material consists of at least one type of hollow fiber chosen from titanium oxide, titanium hydroxide, titanate and amorphous titanium oxide. A modified molecule is fixed to the surface of outer wall of hollow fiber. The modified molecule consists of linker portion and principal chain portion. The surface of outer wall of hollow fiber is bonded to the linker portion of modified molecule. ACTIVITY - Cytostatic. No supporting data is given.

MECHANISM OF ACTION - None given.

USE - For environmental purification, preferably for removal of carcinogenic substance or endocrine disrupters from air and water, for removal of malignant substance from living organisms and in treatment of malignant tissue.

ADVANTAGE - The photocatalytic material has high dispersibility and high degree of photocatalytic activity. DESCRIPTION OF DRAWINGS - The figure shows the photocatalytic material. (Drawing includes non-English language text).

TECHNOLOGY FOCUS:

ORGANIC CHEMISTRY - Preferred Molecule: The length (R) of modified molecule is (2R) times larger than internal diameter (r) of hollow fiber. The bond between linker portion of modified molecule and surface of hollow fiber is covalent bond, hydrogen bond, ionic bond and co-ordinate bond. The linker portion is a functional group selected from carboxyl group, phosphoric acid group, sulfone group, hydroxyl group, amino group, pyridine, diketone, ethylene oxide and siloxane. The modified molecule consists of long chain like silane coupling agent or an alkyl amine. Preferred Fiber: The hollow fiber is layered roll-like titanic acid. The internal diameter (r) of

hollow fiber is 3-8 nm. The oxygen position of hollow fiber is substituted by anions other than oxygen such that anions are interrupted between lattices, and are arranged at grain boundary portion. The anions other than oxygen are nitrogen.

EXTENSION ABSTRACT:

EXAMPLE - F6 (titanium oxide powder) (in g) (0.64) was added to 10 M sodium hydroxide aqueous solution (80 ml) and stirred for 1 minute. A white suspension was obtained which was provided in a fluorine resin-made container. The container was arranged in a stainless steel container and dried at 110degreesC for 20 hours. The container was then cooled to room temperature. A solution containing white deposit was recovered which was washed using 0.1 M hydrochloric acid aqueous solution (100 ml), 3 times until the supernatant liquid had pH below 7. The obtained white powder was an aggregate of hollow fiber. The center portion of fiber had hollow structure with diameter of 3.5 nm. The powder had specific surface area of 78 m2/g. An alkylamine was fixed to the surface of hollow fiber as modified molecule, and a photocatalytic material was obtained.

FILE SEGMENT: CPI
MANUAL CODE: CPI: J04-E04C

L30 ANSWER 4 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-618299 [63] WPIX
DOC. NO. CPI: C2005-185824 [63]
TITLE: Flame-proofed aminoplast resin system for use e.g. in moldings or composites comprises an etherified aminoplast matrix containing encapsulated flame retardants
DERWENT CLASS: A21
INVENTOR: FUERST C; KALTENBACHER S; MACHHERNDL M; SCHMIDTBERGER S
PATENT ASSIGNEE: (AMIA-N) AMI AGROLINZ MELAMINE INT GMBH
COUNTRY COUNT: 107

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005073266	A1	20050811	(200563)*	DE	44[0]	
DE 102004006068	A1	20050818	(200563)	DE		
EP 1720922	A1	20061115	(200675)	DE		
NO 2006003840	A	20061010	(200675)	NO		
CN 1914240	A	20070214	(200746)	ZH		
KR 2007017120	A	20070208	(200755)	KO		
EP 1720922	B1	20071010	(200766)	DE		
DE 502005001680	G	20071122	(200777)	DE		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005073266	A1	WO 2005-EP992	20050128
DE 102004006068	A1	DE 2004-102004006068	20040130
CN 1914240	A	CN 2005-80003566	20050128
EP 1720922	A1	EP 2005-701295	20050128
EP 1720922	B1	EP 2005-701295	20050128
EP 1720922	A1	WO 2005-EP992	20050128
NO 2006003840	A	WO 2005-EP992	20050128
KR 2007017120	A	WO 2005-EP992	20050128

EP 1720922 B1	WO 2005-EP992 20050128
NO 2006003840 A	NO 2006-3840 20060829
KR 2007017120 A	KR 2006-717575 20060830
DE 502005001680 G	DE 2005-502005001680 20050128
DE 502005001680 G	EP 2005-701295 20050128
DE 502005001680 G	WO 2005-EP992 20050128

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
EP 1720922	A1	Based on	WO 2005073266	A
KR 2007017120	A	Based on	WO 2005073266	A
EP 1720922	B1	Based on	WO 2005073266	A
DE 502005001680	G	Based on	EP 1720922	A
DE 502005001680	G	Based on	WO 2005073266	A

PRIORITY APPLN. INFO: DE 2004-102004006068 20040130
INT. PATENT CLASSIF.:

MAIN:	C08L061-34
SECONDARY:	C08J005-24; C08K005-521; C09K021-14
IPC ORIGINAL:	C08G0012-00 [I,C]; C08G0012-00 [I,C]; C08G0012-00 [I,C]; C08G0012-42 [I,A]; C08G0012-42 [I,A]; C08K0009-00 [I,C]; C08K0009-00 [I,C]; C08K0009-10 [I,A]; C08K0009-10 [I,A]; C08L0061-00 [I,C]; C08L0061-00 [I,C]; C08L0061-00 [I,C]; C08L0061-00 [I,C]; C08L0061-20 [I,A]; C08L0061-24 [I,A]; C08L0061-24 [I,A]; C08L0061-28 [I,A]; C08L0061-28 [I,A]; C08L0061-34 [I,A]
IPC RECLASSIF.:	C08G0012-00 [I,C]; C08G0012-42 [I,A]; C08K0005-00 [I,A]; C08K0005-00 [I,A]; C08K0005-00 [I,C]; C08K0005-00 [I,C]; C08K0009-00 [N,C]; C08K0009-10 [N,A]; C08L0061-00 [I,C]; C08L0061-20 [N,A]; C08L0061-24 [I,A]; C08L0061-28 [I,A]; C08L0061-34 [I,A]

BASIC ABSTRACT:

WO 2005073266 A1 UPAB: 20051223

NOVELTY - A flame-proofed aminoplast resin system, especially a melamine/formaldehyde, melamine/urea/formaldehyde or urea/formaldehyde system comprises (A) a matrix containing a modified aminoplast with the primary aminoplast condensate at least partly in etherified form and obtained from a solvent- free melt; and (B) in this matrix an encapsulated flame retardant comprising phosphorus, nitrogen and/or boron in chemically bonded form.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for preparation of the system.

USE - The flame-proofed aminoplast system is used in the following claimed applications

(1) in the production of hybrid resin systems by mixing or reacting with optionally modified melamine-formaldehyde, epoxide, polyurethane, unsaturated polyester or alkyd resin melts in a kneader, mixer or extruder;

(2) as granulates or powders for pressed or injection molded resins;

(3) in the production of storage-stable pre-pregs for composites by powder or melt application to a carrier, followed by pre-condensation at ca. 110-250degreesC for 1-10 minutes with forming and hardening being effected by pressing at pH 3-6.5 and 90-250degreesC/10-250 bar for 0.5-30 minutes; and (4) in the

production of pipes, plates, profiles, injection moldings, fibers or as crosslinkers for powder lacquers.

ADVANTAGE - The system combines thermoplastic processability with good flame resistance and optimal curing and surface characteristics.

TECHNOLOGY FOCUS:

POLYMERS - Claimed Preparation : The system is obtained by (1) adjusting to an alkaline pH a modified aminoplast solution or suspension and concentrating it by solvent distillation at 50-180degreesC/-1 to 0 bar for 1-120 minutes to give a solvent-free melt, the original solution or suspension having been obtained by reacting an aminoplast-former, a carbonyl compound and a 1-4C alcohol at pH 2-7 and 40-160degreesC/0-5 bar for 5-300 minutes;

(2) extruding or kneading the concentrated material at 130-250degreesC/-1 to 0 bar for 0.5-10 minutes to cause pre-condensation and conditioning, an encapsulated additive being added during preparation of the original solution or suspension, during the concentration step (1) and/or during this extrusion or kneading process (2); and

(3) working up and recovering the flame-proofed product.

The etherification or modifying agent is introduced during any stage of the process up to step (2) and the reaction is especially effected in two series-linked extruders. The encapsulated compounds are added to the modified aminoplast as a powder or suspension, the suspending agent especially being the transetherifcation or modifying agent used for the modification of the aminoplast and the suspension being of solids content 30-90 (especially 40-80) weight% and viscosity 10-5000 (especially 250-1000) mPa.s. Preferred Materials : The aminoplast is etherified by a 1-4C alcohol and can contain a transetherification agent, modifier, filler, reinforcing fibers, further polymers, stabilizers, UV-absorber etc., the transetherifying agent being an aliphatic 4-18C alcohol, aromatic alcohol, diol and/or polyol. The encapsulated flame retardant is ammonium- or melamine-polyphosphate, a phosphoric or phosphonic acid ester based on reaction of phosphorus pentoxide or phosphorus trioxide with pentaerythritol or dipentaerythritol and/or an ammonium or melamine salt of such an ester, the flame retardant especially also having a proton- releasing effect. The encapsulating material is a thermosetting resin, especially an aminoplast, epoxide, unsaturated polyester or phenolic resin, especially a modified aminoplast with surface characteristics similar to those of the modified aminoplast forming the matrix. Preferred Composition : The encapsulated compounds are uniformly distributed in the matrix and have a diameter : encapsulant wall thickness ratio of 5-1000, the average diameter of the (preferably spherical) capsules being 1-100 (especially 20-50)mu. The amount of flame retardant compound(s) is 0.5-50 (especially 5-25) weight% based on the hardened aminoplast system and the amount of flame retardant compound(s) in the capsules is 50-98 (especially 70-90) weight% based on the total weight

of encapsulated compounds.

EXTENSION ABSTRACT:

SPECIFIC COMPOUNDS - The encapsulated flame retardant is ammonium- or melamine-polyphosphate, a phosphoric or phosphonic acid ester based on reaction of phosphorus pentoxide or phosphorus trioxide with pentaerythritol or dipentaerythritol and/or an ammonium or melamine salt of such an ester. EXAMPLE - An aminoplast system which could be used in the production of moldings with UL94 value V-0, tensile strength 40 MPa, elongation 1.2%, weight loss during processing 3.5 weight% and volume shrinkage 9% or in the production of fiber- reinforced composites of hardening time 180 seconds with UL94 value V-0, tensile strength 8000 MPa, elongation 13.5%, weight loss during processing 1.9 weight%, volume shrinkage 1% and impact strength 28 kJ/m2 was obtained by (i) heating a mixture of melamine (19 kg), methanol (57.88 kg) and p-toluene sulfonic acid (0.12 kg) at 60degreesC, rapidly adding 37% formaldehyde (24.46 kg), reacting the mixture at 95degreesC to reach the clear point in 28 minutes and further reacting for 2 minutes and cooling to give a 30.5 weight% solids solution; (ii) concentrating the solution at 35kg/hour in 2 series-connected thin-film evaporators at 95degreesC/150 mbar/1400 rpm and 140degreesC/150 mbar/400 rpm respectively to exit at 10.7 kg/hour; and (iii) adding encapsulated Exolit AP 462 (RTM : ammonium polyphosphate) (1.19 kg/hour) while extruding the mixture (11.8 kg/hour) at 150degreesC/960 mbar/330 rpm and then granulating the product.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A05-B01; A08-F01

L30 ANSWER 5 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-615128 [63] WPIX
DOC. NO. CPI: C2005-184943 [63]
TITLE: Manufacture of paper or paperboard sheet involves mixing gelatinized starch and crosslinker compositions comprising aldehyde generating compound capable of forming at least two covalent bonds; and adding to fiber slurry
DERWENT CLASS: A97; E19; F09
INVENTOR: CAPWELL D A
PATENT ASSIGNEE: (BERC-N) BERCEN INC; (BERG-N) BERGEN INC
COUNTRY COUNT: 106

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20050155732	A1	20050721	(200563)*	EN	18[0]	
WO 2005071162	A1	20050804	(200563)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20050155732	A1 Provisional	US 2004-535261P	20040109
US 20050155732	A1	US 2005-31380	20050107
WO 2005071162	A1	WO 2005-US458	20050107

PRIORITY APPLN. INFO: US 2005-31380 20050107
US 2004-535261P 20040109

INT. PATENT CLASSIF.:
IPC RECLASSIF.: D21H0017-00 [I,C]; D21H0017-06 [I,A]; D21H0017-28 [I,A]; D21H0021-14 [I,C]; D21H0021-20 [I,A]

BASIC ABSTRACT:

US 20050155732 A1 UPAB: 20051223

NOVELTY - Manufacturing (M1) paper or paperboard sheet (I) involves providing crosslinker composition comprising aldehyde generating compound capable of forming two covalent or more bonds to functional groups in starch or fiber of the web and adding a gelatinized starch composition and crosslinker compositionsto fiber slurry.

DETAILED DESCRIPTION - Manufacturing (M1) paper or paperboard sheet (I) involves:

(a) providing fiber slurry and a gelatinized starch composition, each suitable for use in making paper or paperboard;

(b) providing at least one crosslinker composition comprising at least one aldehyde generating compound capable of forming at least two covalent bonds to functional groups present in the starch or fiber of the web;

(c) mixing the gelatinized starch composition and the crosslinker composition;

(d) adding the mixture of gelatinized starch composition and crosslinker composition to the fiber slurry contemporaneously to mixing the gelatinized starch composition and the crosslinker composition; and

(e) forming (I).

An INDEPENDENT CLAIM is also included for a method for manufacturing paper or paperboard sheet with increased strength, which is suitable for use in making paper or paperboard.

USE - In the manufacturing of paper or paperboard sheet (claimed).

ADVANTAGE - The paper or paperboard sheet exhibits increased strength. The crosslinker composition used in the method is stable in the absence of starch, gelatinized starch or pulp fiber for at least one week and reacts at a temperature greater than 25degreesC to form covalent bond with starch, gelatinized starch or pulp fiber in less than 1 hour and increases wet strength or the dry strength of (I). The crosslinking composition is storage stabile and facilitates manufacturing of (I) having improved wet and/or dry strength than previous paper or paperboard manufacturing process. The method provides (I) with equivalent strength and reduced basis weight when compared to paper or paperboard materials prepared with previous paper manufacturing processes.

TECHNOLOGY FOCUS:

ORGANIC CHEMISTRY - Preferred Components: The stabilizing agent is organic molecule having at least two functional groups capable of blocking aldehyde residue. The aldehyde-blocking agent is urea, thiourea, amine, alkanol, alkane diol, or alkylene glycol.

The aldehyde-generating compound is a compound of formula ((CH(=O)-CH(OH)-)n'-Z-CH(OH)-CH(OH))m-Z(CH(OH)-CH(=O))n (ia), (ib), (ic) or (id).

The glyoxal generating compound is a compound of formula (iia), (iiia) or R'6-(Z'-CH(OH)-CH(OH))p-R'5 (iva).

Z=monovalent or divalent urea, monovalent or divalent alpha,omega-2-8C alkanediol, 2-8C alkylene glycol, poly(ethylene glycol) having molecular weight of less than 20000, omega-amino-alpha-2-8C alkanol or 5 - 7-membered optionally substituted heterocyclic group having 1N, at least one additional

heteroatom selected from N, O or S and 0 or 1 oxo substituent;
n=0 - 2;
m=0 or 1;
n'=n;
A=methylene, 2-4C alkylene (both optionally substituted) or a single bond;
B=carbonyl, thiocarbonyl or optionally substituted 1,2-ethylene residue;
X1 and X2=O or NR3;
R1 and R2=1-20C alkyl, 1-20C alkoxy, urea, thiourea (all optionally substituted), H or OH;
R1+R2 and R1a+R2a=N,N'-divalent urea;
X'1 - X'3=CH or N (preferably N);
R3 - R5=H, 1-hydroxy-ethan-1-al-1-yl or a blocked glyoxal residue;
NR4R5=optionally substituted N-piperazinyl residue (preferably optionally substituted N-2,3,5,6-tetrahydroxypiperazinyl residue);
R6=alkyl or carboxamide (both optionally substituted) (preferably CONH2 or C(O)NHCH(OH)CHO);
A1=A (preferably single bond or 1-6C alkylene);
B1=B (preferably carbonyl or thiocarbonyl);
Xa and Xb=O or NR'3;
R'3=H, optionally substituted 1-20C alkyl or optionally blocked glyoxal residue, where the unblocked glyoxal residue is 1-hydroxy-2-ethanal-1-yl and the blocked glyoxal residue is 1-hydroxy-2-(protected aldehyde residue)-ethane-1-yl; or 1,2-dihydroxyethylene residue coupled to two rings according to (ia) (preferably H, methyl, ethyl, 1,2-dihydroxy-2-1-4C alkoxy-ethan-1-yl, 1,2-dihydroxy-2-(3-hydroxypropoxy)-ethan-1-yl or 1,2-dihydroxy-2-(2-hydroxypropoxy)ethan-1-yl);
R1a and R2a=R1 (preferably H, OH, methanol, ethanol or urea);
u and p=0 - 1000;
R3a=H, optionally substituted 1-20C alkyl or optionally blocked glyoxal residue, where the unblocked glyoxal residue is 1-hydroxy-2-ethanal-1-yl and the blocked glyoxal residue is 1-hydroxy-2-(protected aldehyde residue)-ethane-1-yl;
R4a=1,2-dihydroxyethylene residue or telechelic oligomer comprising 2n1+1 glyoxal residue alternating with n groups selected from alpha,omega-alkane diol, alkylene glycol and poly(ethylene)glycol;
n1=0 - 100;
Z'=urea, thiourea, guanidine, alkylene glycol, alpha,omega-alkanediol, poly(ethylene glycol), imidazolidin-2-one, tetrahydro-pyrimidin-2-one (all optionally substituted) (preferably urea, thiourea, 2-10C alpha,omega-alkanediol, 2-10C alkylene glycol or polyethylene glycol having 2 - 100 glycol repeating units);
R'5=alkanediol, urea, alkylene glycol (all optionally substituted), H, alkoxy, hydroxyalkoxy, amino, OH, or mono and dialkylamino;
R'6=alkyl, alkanoyl, unblocked glyoxal residue or blocked glyoxal residue (all optionally substituted) or H.
Provided that:
(1) if m is 1, then n' is n;

(2) if m is 0 then n' is 0;
(3) at least one of m and n is not 0.
The aldehyde generating compounds of formulae (ia), (iiia) or
(iva) degrades to generate at least 1 equivalent of glyoxal when the crosslinking composition is contacted with starch or pulp fiber.

POLYMERS - Preferred Components: The starch is self-retaining and is cationic starch or pregelatinized self-retaining starch selected from potato, corn or wheat starch. Preferred Composition: The crosslinker composition comprises aldehyde-generating compound (0.001 - 80 weight%) in an aqueous media. The crosslinker composition comprises a compound having at least two aldehyde residues (preferably glyoxal) (at least 1 equivalent); and at least one stabilizing compound (0.25 - 5 equivalents). The crosslinker composition does not comprise starch or gelatinized starch. The crosslinker composition further comprises aldehyde-blocking agent (at least 0.1 molar equivalent) relative to the aldehyde-generating compound.

TEXTILES AND PAPER - Preferred Method: In (M1), the gelatinized starch composition and the crosslinker composition are mixed together in a batch process or in continuous flow process less than about 1 hour (preferably less than about 30 minutes, especially less than 10 minutes, particularly less than about 1 minute) prior to addition to the fiber slurry. (I) Is also prepared by a method (M2) of manufacturing involving: steps (a) and (b); followed by preparing paper or paperboard web comprising pulp fiber and at least one starch prepared by mixing the gelatinized starch and the fiber slurry; and contacting the web with the crosslinker composition under conditions conductive to formation at least two covalent bonds to functional groups present in the starch or fiber of the web. (M2) Further involves drying paper or paperboard web. In (M2), the crosslinker composition is contacted with the web prior to the drying process or after the drying step has removed at least a portion of moisture from the paper or paperboard web.

EXTENSION ABSTRACT:

SPECIFIC COMPOUNDS - 19 Compounds are specifically disclosed as the aldehyde-generating compounds e.g. 3,4-dihydroxy-imidazolidin-2-one and (4,5-dihydroxy-3-(1-hydroxy-2-oxo-ethyl)-2-oxo-imidazolidin-1-yl)-hydroxy-acetaldehyde. EXAMPLE - A flask was charged with glyoxal (40% in water, 145 g) and the contents were stirred and warmed to 55 degrees C. Urea (50% in water, 120 g) was added to the glyoxal solution over 4 hours at 55 degrees C. To this mixture propylene glycol (38 g) and catalytic amount of sulfuric acid (98%, 1 g) was added. The mixture was heated to 70 degrees C for 2 hours to generate 3,4-dihydroxy-imidazolidin-2-one as glyoxal generating compound (A). A gelatinized starch composition (test) was prepared by mixing Penford PAR 6048AR (RTM; cationic pregelatinized potato starch) and (A) at 32 degrees C over 1 hour with agitation. The resulting mixture had solid content of 23.7 weight%. A control OCC furnish with no additive was used as control. The compositions were then formed into hand sheet sets. The test and control hand sheet sets were tested for dry tensile and shelf-life properties. The results for (A)/control were: dry tensile = 57.65/46.04; and shelf life = 3 months/not

applicable. The results showed that the dry strength of the paperboard was improved when (A) was added to the starch. The test sheet exhibited improved stability and strength performance under mild condition as compared to the control hand sheet.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A03-A; A08-D01; A11-A03; A11-C02; A12-W06D; E07-D09C; E07-D11; E07-D13B; E07-D13C; E10-A13A2; E10-D01D; F05-A06C

L30 ANSWER 6 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-214263 [22] WPIX
DOC. NO. CPI: C2005-068447 [22]
TITLE: Functionalization of yarn or textile product useful in dyeing of fabrics and cloths involves contacting it with linker molecule containing activatable chemical group and functional groups in presence of non-linker molecule
DERWENT CLASS: A87; A96; D16; D22; F06; P73
INVENTOR: BRUININK A; CHAI GAO H; CREVOISIER F; RASCHLE P; SIGRIST H; BILLIA M F; CHAI G H
PATENT ASSIGNEE: (CSEM-N) CSEM CENT SUISSE ELECTRONIQUE & MICROTEC
COUNTRY COUNT: 107

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005019518	A1	20050303	(200522)*	EN	41[4]	
EP 1664416	A1	20060607	(200638)	EN		
US 20070026239	A1	20070201	(200712)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005019518	A1	WO 2004-IB2962	20040826
EP 1664416	A1	EP 2004-769354	20040826
EP 1664416	A1	WO 2004-IB2962	20040826
US 20070026239	A1	WO 2004-IB2962	20040826
US 20070026239	A1	US 2006-569510	20060724

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
EP 1664416	A1	Based on	WO 2005019518	A

PRIORITY APPLN. INFO: GB 2003-19929 20030826
INT. PATENT CLASSIF.:
IPC ORIGINAL: D06M0010-00 [I,A]; D06M0010-02 [I,A]; D06M0015-03 [I,A]; D06M0015-15 [I,A]; B32B0017-06 [I,A]; B32B0017-06 [I,C]
IPC RECLASSIF.: D06M0010-00 [I,A]; D06M0010-00 [I,C]; D06M0010-02 [I,A]; D06M0015-01 [I,C]; D06M0015-03 [I,A]; D06M0015-15 [I,A]

BASIC ABSTRACT:

WO 2005019518 A1 UPAB: 20050708

NOVELTY - Functionalizing yarn or textile product (A1) comprising contacting a linker molecule containing at least one activatable chemical group and functional groups with (A1), optionally in presence of non- linker molecule; activating the chemical groups to cause covalent attachment of the linker molecule to (A1) and the non-linker molecule, and providing (A1) with the property of the non-linker molecule, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a composition comprising (A1), linker molecule and optionally a non-linker molecule.

USE - The method is useful for functionalizing yarn or textile product (claimed) useful in dyeing of fabrics and cloths; for immobilization to yarn or textile of biomolecules, which are useful in medicines for treating wounds.

ADVANTAGE - The yarn or textile product are obtained with the improved desired property. The linker molecule minimizes the denaturation of biomolecule. The method effectively immobilizes biomolecules on the yarn and textile products, which allows the biomolecules to retain their biological activity. The method allows unrestricted covalent attachment of low and high molecular weight substances to yarns and textiles; and provides controlled release of immobilized species from functionalized yarns and textile products with antibiotic properties. In comparison with current direct chemical derivatization of yarns and textile products by batch processing, linker polymers with activatable chemical reactivity can add beneficial physical and chemical characteristic to a textile. Modification of yarn and textile using linker polymers allows the surface charge and/or surface polarity of the yarn or textile to be changed, and allows the possibility of secondary chemical modification of the yarn or textile. Use of linker polymers allows attachment of dyes, polymers, biomolecules, or inorganic materials to textile of any shape and dimension at any stage in manufacture of the textile.

TECHNOLOGY FOCUS:

TEXTILES AND PAPER - Preferred Method: The non-linker molecule is covalently attached to (A1) in a single reaction step. The linker molecule is contacted with (A1) before the non-linker molecule. The method further involves contacting (A1) with positively charged metal ions (preferably sliver ions) to bind the metal ions to the functional groups before the linker molecule. (A1) is pre-treated with oxygen plasma to improve its wetting properties.

Preferred Components: The linker molecule is multiply substituted with activatable chemical groups. The activatable chemical group (preferably thermochemically or photochemically activatable) is activated with actinic energy and converts to a highly reactive intermediate (preferably carbene intermediate). The linker molecule comprises a natural or synthetic polymer (preferably biopolymer, especially protein, peptide, polysaccharide or dextran-based polymer, especially a polysaccharide and at least two activatable chemical groups). The linker molecule comprises a cleavage site, which is cleaved under predetermined conditions to release the non-linker molecule or functional group from (A1), (preferably a target for hydrolytic enzyme to allow enzyme

-induced or biosystem-induced release of the non-linker molecule or functional group, especially a substrate for endoglycosidase or endopeptidase). The linker molecule is either a dextran-based biopolymer comprising a target for dextranase; a hyaluronic acid-based biopolymer comprising a target for hyaluronidase; a protein-based polymer comprising a target for protease; or a peptide-based polymer comprising a target for endopeptidase. (A1) Is of natural or synthetic origin, a blend of synthetic yarns or a blend of natural and synthetic yarns (preferably synthetic polyester). The functional groups have desired property different from the property of non-linker molecule.

ORGANIC CHEMISTRY - Preferred Components: The non-linker molecule is a solvent, synthetic or natural chemical, synthetic or natural dye, synthetic polymer, a biopolymer, a biomolecule, a biologically active molecule, a synthetic or natural vitamin and/or hormone. The functional group is a positively charged group at neutral pH (such an amino group), negatively charged group at neutral pH (such as carboxyl group), thiol group, or dye such as fluorescent dye (preferably negatively charged group).

BIOLOGY - Preferred Components: The non-linker molecule is preferably enzyme (e.g. lysozyme), a growth factor, an anti-microbial agent, an antibiotic, a fungicide and/or an agent capable of suppressing the proliferation of bacteria or fungi.

EXTENSION ABSTRACT:

EXAMPLE - A polyester tissue was incubated with aqueous solution containing OptoDex A (RTM; linker polymer having photoactive chemical species and amino function) after oxygen plasma treatment and exposed to light for photoimmobilization. After photoimmobilization, the excess OptoDex (RTM; linker polymer having photoactive chemical species and amino function) was removed. Treatment of textile with linker polymer provided improved wetting properties and does not alter the appearance and texture of the sample.

FILE SEGMENT: CPI; GMPI

MANUAL CODE: CPI: A08-M01A; A12-G; A12-S05N; A12-S05P; A12-V01; A12-V03A; A12-W11L; D05-A01A1; D05-A01A2; D05-A01B; D05-H10; D09-C04B; F03-C02; F03-C06; F03-F07; F04-E04

L30 ANSWER 7 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

ACCESSION NUMBER: 2005-210174 [22] WPIX

CROSS REFERENCE: 2006-645848

DOC. NO. CPI: C2005-067550 [22]

TITLE: Chemically bonding odor-encapsulating agent to textile material involves dipping the textile material into a water bath containing the odor-encapsulating cyclodextrin and imidazolidone cross-linking agent, followed by removing and heating

DERWENT CLASS: A87; D22; E13; F06

INVENTOR: BROWN D A; TODD D E

PATENT ASSIGNEE: (DANR-C) DAN RIVER INC

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 6861520	B1	20050301	(200522)*	EN	9[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6861520 B1		US 2003-427428	20030430

PRIORITY APPLN. INFO: US 2003-427428 20030430
INT. PATENT CLASSIF.:
IPC RECLASSIF.: C08B0013-00 [I,A]; C08B0013-00 [I,C]; C08B0037-00 [I,C]; C08B0037-08 [I,A]; C08B0037-16 [I,A]

BASIC ABSTRACT:

US 6861520 B1 UPAB: 20050708

NOVELTY - Chemically bonding an odor-encapsulating agent to a textile material involves dipping the textile material into a water bath containing an odor-encapsulating cyclodextrin and imidazolidone cross -linking agent; removing the textile material from the water bath; and heating the textile material.

DETAILED DESCRIPTION - Chemically bonding an odor-encapsulating agent to a textile material involves dipping the textile material into a water bath containing an odor-encapsulating cyclodextrin and imidazolidone cross-linking agent; removing the textile material from the water bath; and heating the textile material, where the cyclodextrin is cross-linked with imidazolidone by forming an ether bond between the imidazolidone and the cyclodextrin and the imidazolidone is cross-linked with the textile material by forming an ether bond between the imidazolidone and the textile material.

USE - For chemically bonding an odor-encapsulating agent (e.g. cyclodextrin) to textile material e.g. cellulose-containing textile material (claimed).

ADVANTAGE - The process provides a strong bond between the agent and the fabric to increase wash resistance and thereby provide more durable odor-encapsulating activity to the fabric. The process bonds an odor-encapsulating agent to textiles in a more uniform manner thus enhancing the odor-encapsulating effectiveness of the treated fabric; and accomplishes such strong chemical bonding of an odor-encapsulating agent to a textile material in a single-step process without the need to first form derivatives of the agent. The textile formed by such process can comprises an article of clothing to trap odors emanating from a wearer.

TECHNOLOGY FOCUS:

ORGANIC CHEMISTRY - Preferred Process: The cyclodextrin is cross-linked with imidazolidone by forming an ether bond between the imidazolidone and a hydroxyl group on the cyclodextrin. The imidazolidone is cross-linked with the textile material by forming an ether bond between the imidazolidone and a hydroxyl group on the textile material. The heating the textile material is carried out at 320 degrees F for two minutes. The process further involving providing a compound complexed with the cyclodextrin for release; providing in the water bath magnesium chloride to act as a Lewis acid to promote

selective
cross-linking between the cyclodextrin and the cellulose; and providing in the water bath a wetting agent, pH adjuster and softening agent. After removing the textile material from the water bath and before heating, padding the textile material and tentering the textile material by heat drying under tension. Tentering the textile material further involves heating the textile material between 320 - 380 degrees F.

Preferred Component: The textile material comprises cellulose and the cyclodextrin is chemically bonded with an ether bond to the cellulose. The cyclodextrin comprises an alpha-cyclodextrin, beta-cyclodextrin, gamma-cyclodextrin, methyl-substituted cyclodextrin, ethyl-substituted cyclodextrin, hydroxyalkyl-substituted cyclodextrin, branched cyclodextrin, anionic cyclodextrin, cationic cyclodextrin, quaternary ammonium cyclodextrin and/or amphoteric cyclodextrin. The compound complexed with the cyclodextrin comprises an antimicrobial agent, perfume, odor-mitigating chemical or insecticide.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A03-A01A; A10-E08; A12-G; A12-S05T; D09-B; E06-A03; E07-D09D; F03-C09

L30 ANSWER 8 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-021122 [02] WPIX
DOC. NO. CPI: C2003-005353 [02]
TITLE: Preparation of modified fluffed pulp, used for absorbent articles, involves treating cellulose pulp by nitroxide-mediated oxidation, and fluffing treated pulp which contains predetermined amount of aldehyde functionality
DERWENT CLASS: A97; D22; E13; E16; F09; P32; P34
INVENTOR: CIMECIOGLU A L; CIMECIOGLU L A; SHORE M M
PATENT ASSIGNEE: (CIME-I) CIMECIOGLU A L; (NATT-C) NAT STARCH & CHEM INVESTMENT HOLDING COR; (NATT-C) NAT STARCH & CHEM INVESTMENT HOLDING CORP; (SHOR-I) SHORE M M
COUNTRY COUNT: 32

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 1245722	A2	20021002	(200302)*	EN	16[2]	
CA 2376741	A1	20020928	(200302)	EN		
NO 2002001420	A	20020930	(200302)	NO		
US 20030024661	A1	20030206	(200313)	EN		
KR 2002077064	A	20021011	(200314)	KO		
AU 2002027568	A	20021003	(200315)	EN		
JP 2003026701	A	20030129	(200319)	JA	41	
US 6821383	B2	20041123	(200478)	EN		
EP 1245722	B1	20060607	(200642)	EN		
DE 60211989	E	20060720	(200649)	DE		
ES 2264709	T3	20070116	(200707)	ES		
DE 60211989	T2	20070614	(200740)	DE		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1245722 A2		EP 2002-5361	20020314
US 20030024661 A1	Provisional	US 2001-279277P	20010328
US 6821383 B2	Provisional	US 2001-279277P	20010328
US 20030024661 A1	Provisional	US 2001-303498P	20010706
US 6821383 B2	Provisional	US 2001-303498P	20010706
US 20030024661 A1		US 2002-58723	20020128
US 6821383 B2		US 2002-58723	20020128
CA 2376741 A1		CA 2002-2376741	20020314
DE 60211989 E		DE 2002-611989	20020314
DE 60211989 E		EP 2002-5361	20020314
ES 2264709 T3		EP 2002-5361	20020314
KR 2002077064 A		KR 2002-14944	20020320
AU 2002027568 A		AU 2002-27568	20020321
NO 2002001420 A		NO 2002-1420	20020321
JP 2003026701 A		JP 2002-88968	20020327
DE 60211989 T2		DE 2002-611989	20020314
DE 60211989 T2		EP 2002-5361	20020314

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
DE 60211989	E	Based on	EP 1245722	A
ES 2264709	T3	Based on	EP 1245722	A
DE 60211989	T2	Based on	EP 1245722	A

PRIORITY APPLN. INFO: US 2002-58723 20020128
US 2001-279277P 20010328
US 2001-303498P 20010706
US 2001-279277 20010328
US 2001-303498 20010706

INT. PATENT CLASSIF.:

MAIN: D21C009-00

SECONDARY: D21H017-45

IPC ORIGINAL: D21C0009-00 [I,A]; D21C0009-00 [I,A]; D21C0009-00 [I,C]; D21C0009-00 [I,C]

IPC RECLASSIF.: A61F0013-00 [I,A]; A61F0013-00 [I,C]; A61F0013-15 [I,A]; A61F0013-15 [I,C]; A61F0013-20 [I,A]; A61F0013-20 [I,C]; A61F0013-53 [I,A]; A61F0005-44 [I,A]; A61F0005-44 [I,C]; A61K0008-00 [I,A]; A61K0008-00 [I,C]; A61K0008-72 [I,A]; A61K0008-72 [I,C]; A61K0008-73 [I,A]; A61L0015-00 [I,A]; A61L0015-00 [I,C]; A61L0015-16 [I,C]; A61L0015-28 [I,A]; A61L0009-16 [I,A]; A61L0009-16 [I,C]; A61Q0001-02 [I,A]; A61Q0001-02 [I,C]; A61Q0001-14 [I,A]; A61Q0001-14 [I,C]; C08B0015-00 [I,C]; C08B0015-02 [I,A]; C08B0015-04 [I,A]; D21C0009-00 [I,A]; D21C0009-00 [I,C]; D21H0011-00 [I,C]; D21H0011-20 [I,A]

BASIC ABSTRACT:

EP 1245722 A2 UPAB: 20050527

NOVELTY - A method for preparing modified fluffed pulp involves treating cellulose pulp by a nitroxide-mediated oxidation, and fluffing the treated cellulose pulp. The treated cellulose pulp contains 1-50 mmole of aldehyde functionality/100 g of cellulose pulp.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) Modified fluff pulp.
(2) An absorbent article comprising the modified fluff pulp.
USE - For absorbent articles (claimed) such as adult incontinence products, diapers (disposable, training pants), feminine care and/or hygiene products (including sanitary napkins, tampons, bandages, liners), food (including meat) packaging pads, liners or casings, humidity or odor removing filters, insulation (against moisture, heat or acoustic problems), agricultural materials needing to retain moisture, and tissue and towel applications including cleaning wipes, paper handkerchiefs, cosmetic wipes and napkin/serviettes.
ADVANTAGE - The modified fluffed pulp has high absorbent properties including absorption capacity, structural integrity, wicking rate and wicking capacity. The process for producing the fluffed pulp eliminates the need for cross- linking agents. The modified fluff pulp has fiber strength, stiffness, resiliency, and improved fluid transport properties. It has a relatively high level of anionic groups which enables the improved retention of conventional complementary additives such as debonders, fixatives and chemical additive binders.
TECHNOLOGY FOCUS:
ORGANIC CHEMISTRY - Preferred Compounds: The nitroxyl radical mediator is a di-tertiary alkyl nitroxyl radical of formula
(I) or (II). The amount of the nitroxyl radical mediator is 0.001-20 weight% based on the weight of cellulose pulp.
A = chain having two or three atoms, each selected from carbon, nitrogen and oxygen; and
R1-R6 = alkyl groups.
TEXTILES AND PAPER - Preferred Pulp: The treated cellulose pulp has 1-20 mmole aldehyde groups/100 g of cellulose pulp. It has
an aldehyde to carboxylic acid functionality ratio of greater than 0.2 based on 100 g of cellulose pulp, for each functionality.
Preferred Oxidant: The oxidant is an alkali or alkaline-earth
metal hypohalite having an oxidizing power of about 0.05-15.0 g active chlorine per 100 g of substrate, preferably sodium hypochlorite or sodium hypobromite.
Preferred Process: The nitroxide-mediated oxidation involves oxidizing the cellulose pulp in a suitable medium with an oxidant in the presence of a nitroxyl radical mediator. The method is performed in the presence of co-catalyst(s).
POLYMERS - Preferred Process: The nitroxide-mediated oxidation method further comprises oxidizing the cellulose pulp in the presence of 0.005-0.5% polyacrylamide.
EXTENSION ABSTRACT:
SPECIFIC COMPOUNDS - The nitroxyl radical mediator is 2,2,6,6-tetramethyl-1-piperidinyloxy radical (TEMPO) or 4-acetamido-TEMPO.
EXAMPLE - 4-Acetamido-2,2,6,6-tetramethyl-1-piperidinyloxy radical (24.8 mg) and sodium bromide (1.24 g) were added to a stirred suspension of bleached softwood kraft pulp at 5% consistency. The pH of the mixture was adjusted to 9.5 using 0.98 N sodium hydroxide. Sodium hypochlorite (52.2 g of 9.5% solution) was introduced and the mixture was stirred at 10 degrees C for 30 minutes. The pH of the suspension was maintained at 9.5 with 0.98 N sodium hydroxide throughout the reaction. At the end of the treatment, the reaction was terminated using ascorbic acid or ethanol to scavenge the residual hypochlorite. The pulp was

filtered and washed extensively with water at pH 4-5. The pulp was re-slurried in water for subsequent use or dried in air at room temperature for future use. The pulp had aldehyde and carboxyl content of 10.3 mmole/100 g and 8.8 mmole/100 g cellulose pulp respectively. - Hand sheets were made on a sheet former using the modified pulp, and the hand sheets were couched and dried. The resulting sheets were allowed to equilibrate under ambient conditions prior to defibration and screening. The fluff fibers were allowed to equilibrate, dispersed in air, blended with super absorbent polymer (crosslinked sodium polyacrylate) and formed in to three equal weight layers. The layers were pressed for one minute and the resulting pad was trimmed into a circular structure. The pad was repressed for one minute and allowed to recover for 1 minute. The pulp had dry resiliency of 4.38 mm at 157 psi. The resulting air laid pad had saline absorbent capacity of 14.0 g/g, saline wicking rate of 0.42 cm/second and saline wicking capacity of 3.06 ml/second.

FILE SEGMENT: CPI; GMPI
MANUAL CODE: CPI: A12-W06; D09-C02; D09-C03; D09-C04; E07-A01; E07-A02; E07-A02E; E07-A02J; E07-H; E10-A01; E31-C;
F05-A06D; F05-A07

L30 ANSWER 9 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-457121 [49] WPIX
CROSS REFERENCE: 2001-482886
DOC. NO. CPI: C2001-138180 [49]
TITLE: Preparation of a polysaccharide containing material
having at least one desired structural, chemical, physical, electrical and/or mechanical property
DERWENT CLASS: A11; A97; D16; F01; F09
INVENTOR: LEVY I; NUSSINOVITCH A; SHOSEYOV O
PATENT ASSIGNEE: (CBDT-N) CBD TECHNOLOGIES LTD; (YISS-C) YISSUM RES & DEV CO; (YISS-C) YISSUM RES DEV CO HEBREW UNIV JERUSALEM
COUNTRY COUNT: 93

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2001034091	A2	20010517	(200149)*	EN	121[20]	
AU 2001011729	A	20010606	(200152)	EN		
EP 1230374	A2	20020814	(200261)	EN		
CN 1433473	A	20030730	(200365)	ZH		
AU 769461	B	20040129	(200412)	EN		
JP 2004504803	W	20040219	(200414)	JA	190	
BR 2000015520	A	20040720	(200451)	PT		
AU 2004201766	B2	20050818	(200559)#	EN		
ZA 2002004537	A	20050727	(200560)	EN	127	
IN 2002CN00857	P4	20070427	(200737)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001034091	A2	WO 2000-IL708	20001102
BR 2000015520	A	BR 2000-15520	20001102
CN 1433473	A	CN 2000-818140	20001102

EP 1230374 A2	EP 2000-973191 20001102
EP 1230374 A2	WO 2000-IL708 20001102
JP 2004504803 W	WO 2000-IL708 20001102
BR 2000015520 A	WO 2000-IL708 20001102
AU 2001011729 A	AU 2001-11729 20001102
AU 769461 B	AU 2001-11729 20001102
JP 2004504803 W	JP 2001-536097 20001102
ZA 2002004537 A	ZA 2002-4537 20020606
AU 2004201766 B2	AU 2004-201766 20040422
IN 2002CN00857 P4	WO 2000-IL665 20001019
IN 2002CN00857 P4	IN 2002-CN857 20020607

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 769461 B	Previous Publ	AU 2001011729 A
AU 2004201766 B2	Previous Publ	AU 2004201766 A
AU 2004201766 B2	Div ex	AU 769461 B
AU 2001011729 A	Based on	WO 2001034091 A
EP 1230374 A2	Based on	WO 2001034091 A
AU 769461 B	Based on	WO 2001034091 A
JP 2004504803 W	Based on	WO 2001034091 A
BR 2000015520 A	Based on	WO 2001034091 A

PRIORITY APPLN. INFO: US 1999-166389P 19991118
US 1999-164140P 19991108
AU 2004-201766 20040422

INT. PATENT CLASSIF.:

MAIN: A61K031-00; C12P019-04; D21C009-00

SECONDARY: C12N015-09; D06M016-00; D21H021-20

IPC RECLASSIF.: A01H0005-00 [I,A]; A01H0005-00 [I,C]; A61K [I,S]; C08B0015-00 [I,A]; C08B0015-00 [I,C]; C08B0015-10 [I,A]; C08B0031-00 [I,A]; C08B0031-00 [I,C]; C08B0037-00 [I,A]; C08B0037-00 [I,C]; C08B0037-08 [I,A]; C12N0015-09 [I,A]; C12N0015-09 [I,C]; C12N0005-10 [I,A]; C12N0005-10 [I,C]; C12N0009-24 [I,A]; C12N0009-24 [I,C]; C12P0019-00 [I,C]; C12P0019-04 [I,A]; C12S0011-00 [I,A]; C12S0011-00 [I,C]; D06M0015-01 [I,C]; D06M0015-15 [I,A]; D06M0016-00 [I,A]; D06M0016-00 [I,C]; D21C0009-00 [I,A]; D21C0009-00 [I,C]; D21H0011-00 [I,C]; D21H0011-20 [I,A]; D21H0017-00 [I,A]; D21H0017-00 [I,C]; D21H0021-14 [I,C]; D21H0021-20 [I,A]

BASIC ABSTRACT:

WO 2001034091 A2 UPAB: 20060117

NOVELTY - Preparation of material containing polysaccharide (I), comprises contacting polysaccharide structures of (I) with a polysaccharide binding domain containing composition before, during and/or after processing the polysaccharide structures into (I). The polysaccharide material has at least one desired structural, chemical, physical, electrical and/or mechanical property.

DETAILED DESCRIPTION - Preparation of (I) comprises contacting polysaccharide structures of (I) with a polysaccharide binding domain containing composition before, during and/or after processing the polysaccharide structures into (I). (I) Has at least one desired structural, chemical, physical, electrical and/or mechanical property.

INDEPENDENT CLAIMS are also included for the following: (1) a composition comprising the polysaccharide containing material having a polysaccharide binding domain containing composition bound to the polysaccharide structures; (2) a composition as in (1), in which the polysaccharide binding domain containing composition includes at least two covalently coupled polysaccharide binding domains forming a polysaccharide binding domain coupler crosslinking the polysaccharide structures; (3) a composition as in (1), in which the polysaccharide binding domain containing composition includes at least one polysaccharide binding domain and a functionalizing group or a hydrophobic group or a hydrophilic group or a (photo)chemical reactive group being covalently coupled thereto; (4) a composition comprising a polysaccharide binding domain coupler including at least two covalently coupled polysaccharide binding domains; (5) a nucleic acid construct comprising a polynucleotide encoding a fusion protein including at least two polysaccharide binding domain; and

(6) manufacturing (I) containing at least one desired structural, chemical, physical, electrical and/or mechanical property, comprises contacting polysaccharide structures of (I) with a polysaccharide binding domain during or after processing the structures into (I), and hence covalently coupling at least one group to the binding domain forming (I) having the desired structured, chemical, physical, electrical and/or mechanical property.

USE - The method is used to alter the structural, chemical, physical, electrical and mechanical properties of polysaccharide materials such as paper, yarns, fibers and textiles, using biological crosslinking agents.

ADVANTAGE - The polysaccharide containing materials have improved mechanical properties such as wet strengths, durability and elasticity. The polysaccharide binding domain reagent can be applied in the forming stage in fluting paper manufacture which eliminates the sizing step. Use of a biological crosslinker improves the recyclability of paper products. The polysaccharide binding domain reagent maintains the fine fibers in a slurry therefor resulting in better recovery of raw materials. The polysaccharide binding domain molecules are eluted by strong alkaline conditions which enhances the ability of the alkaline glue used in binding to penetrate paper. TECHNOLOGY FOCUS:

BIOTECHNOLOGY - Preferred Preparation: The polysaccharide containing material is selected from paper, textile, yarn and fiber. The polysaccharide binding domain containing composition includes:

(i) a polysaccharide binding domain; and

(ii) a group (Z) covalently coupled thereto.

Group Z is selected from at least one additional polysaccharide binding domain, another protein, a hydrophobic group, a hydrophilic group, a biological moiety, an enzyme, a chemical reactive group, a chemical photoreactive group, a lipase, a lacase, a protein A-antibody, a peptide, a polypeptide, a hydrocarbon or hydrocarbon derivative, a fatty acid derivative, an electrically charged group, an ionic group, a silicon binding group, a polymer binding group, a metal, a metallothionein-like protein, ferritin, a metal binding group, a bacterial siderophores, a metallothionein, a thiol group, an aldehyde, a maleimide, a hydrazide, an epoxide, a carbodiimide and a phenylazide.

The polysaccharide binding domain comprises cellulose or starch, or is capable of binding to cellulose, starch or chitin, or is a glucan-binding domain or includes streptococcal glucan-binding repeats.

Preferred Properties: The structural property is selected from a predetermined level of crosslinks between the polysaccharide structures, a predetermined aggregation of the polysaccharide structures and a predetermined surface texture of the polysaccharide containing material. The chemical property is selected from predetermined hydrophobicity, a predetermined hydrophilicity, a predetermined wet-ability, a predetermined chemical reactivity, a predetermined photochemical reactivity, a predetermined functionality and a predetermined surface tension. The physical property is selected from predetermined Young's modulus, a predetermined strain at maximum load, a predetermined energy to break point, a predetermined water absorbency, a predetermined swellability and a predetermined toughness. The electrical property is selected from a predetermined surface charge and a predetermined electrical conductivity. The mechanical property is selected from a predetermined tensile strength, a predetermined resistance to shear, a predetermined abrasion resistance, a predetermined frictional coefficient, a predetermined elasticity and a predetermined wet strength.

Preferred Acid: The nucleic acid further comprises at least one additional polynucleotide encoding at least one linker peptide coupling the at least two polysaccharide binding domains.

EXTENSION ABSTRACT:

EXAMPLE - A cellulose binding domain functional group was prepared by coupling a cellulose binding domain to a functional group having affinity for a heavy metal, such as a metal-binding protein. A substrate comprising cellulosic material such as cotton fibers was treated with the cellulose binding domain functional group under conditions such that the cellulose binding domain component of the cellulose binding domain functional group was bound to the substrate. The substrate was functionalized by the metal-binding functional group to provide a metal binding substrate or filter medium. A stream of liquid containing an excessive level of a heavy metal was passed over the metal binding filter medium. The concentration of the heavy metal in the liquid stream was greatly decreased to a non-toxic level. Cellulose fibers for papermaking were treated with a cellulose binding domain hydrophobic functional group as above to provide cellulose fibers having a hydrophobic group attached thereto. Paper produced from the treated cellulose fibers was hydrophobic and resistant to water. Tissue paper was treated with a cellulose binding domain hydrophilic functional group and showed increased absorption of water and aqueous liquids.

FILE SEGMENT: CPI

MANUAL CODE: CPI: A03-A00A; A12-S05X; A12-W06D; D05-C08; D05-C11; D05-H10; D05-H12; D05-H12C; D05-H12E; D05-H17C; F05-A06C

L30 ANSWER 10 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

ACCESSION NUMBER: 2001-441252 [47] WPIX

DOC. NO. CPI: C2001-133187 [47]
TITLE: Manufacture of wet performance paper web for absorption goods, involves treating web comprising cellulosic papermaking fiber with polymeric anionic compound aqueous solution, curing and treating with debonder
DERWENT CLASS: A87; D22; F08; F09
INVENTOR: SUN T
PATENT ASSIGNEE: (KIMB-C) KIMBERLY-CLARK WORLDWIDE INC
COUNTRY COUNT: 91

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2001031122	A1	20010503	(200147)*	EN	37[0]	
AU 2000080220	A	20010508	(200149)	EN		
MX 2002004054	A1	20021001	(200370)	ES		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001031122	A1	WO 2000-US28437	20001013
AU 2000080220	A	AU 2000-80220	20001013
MX 2002004054	A1	WO 2000-US28437	20001013
MX 2002004054	A1	MX 2002-4054	20020423

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000080220	A	Based on	WO 2001031122 A
MX 2002004054	A1	Based on	WO 2001031122 A

PRIORITY APPLN. INFO: US 1999-426299 19991025
INT. PATENT CLASSIF.:
IPC RECLASSIF.: D21H0017-00 [N,C]; D21H0017-43 [N,A]; D21H0017-45 [N,A]; D21H0021-14 [I,C]; D21H0021-20 [I,A]; D21H0025-00 [I,C]; D21H0025-06 [I,A]

BASIC ABSTRACT:
WO 2001031122 A1 UPAB: 20060117
NOVELTY - A web comprising cellulosic papermaking fiber is formed and treated with an aqueous solution of polymeric anionic reactive compound (PARC), having a molecular weight of 5000 or less. The treated web is cured so that covalent bonds are formed between PARC and cellulosic fibers. Finally, the fibers are treated with a debonder.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the wet performance paper web.
USE - For absorption goods and premoistened tissue (claimed).
ADVANTAGE - The paper web has high wet resiliency, high wet strength and high wet/dry strength ratio. TECHNOLOGY FOCUS:
INORGANIC CHEMISTRY - Preferred Method: The chemical debonder is present in the PARC solution. The web is treated with the debonder before or after treating the web with PARC solution, or before the fibers are formed into the web. The debonder is a quaternary ammonium compound or an imidazolinium

compound. The PARC solution is applied by coating, printing or spraying. The web is dried before applying PARC. The web is dried to a dryness level of 90% or more, at 150degreesC or less. The web is cured at 150-190degreesC for 1-10 minutes. The web is cured by passing heated gas through the web, impinging heated air on web surface, contacting the web with a heated surface or exposing the web to infrared radiation, microwave energy or radio frequency energy.

Preferred Components: 50-200% of aqueous solution is applied on the web. PARC is added to the web in an amount of 0.3-8%, preferably 0.7-2% by dry weight of the web.

Preferred Parameters: The wet tensile strength of the cured web is 0.7 Nm/g or more, preferably 0.8-1.8 Nm/g. The wet/dry ratio of the treated and cured web is 20% or more, preferably 40% or more.

Preferred Aqueous Solution: The aqueous solution comprises a catalyst selected from alkali metal hypophosphite, alkali metal phosphite, alkali metal polyphosphonate, alkali metal phosphate and alkali metal sulfonate, or a non-phosphorus catalyst. The aqueous solution is free of formaldehyde or cross-linking agent that evolve formaldehyde. PARC solution has a pH of 4 or more, and viscosity of 5 c.p.s or less, preferably 1-2 c.p.s at 25degreesC.

POLYMERS - PARC comprises a polymeric compound (copolymer, terpolymer or homopolymer) preferably of maleic acid, vinyl acetate or ethyl acetate, having repeating units containing two or more anionic carboxylate groups which can covalently bond to hydroxyl groups of the cellulosic fibers. The carboxylate groups are on adjacent carbons and are capable of forming a cyclic anhydride. PARC comprises a copolymer having low glass transition temperature, preferably polyvinyl acetate.

TEXTILES AND PAPER - Preferred Paper Web: The wet tensile strength of the treated and cured paper web is 0.7 Nm/g or more, preferably 0.7-1.6 Nm/g. The basic weight of the paper web is 40-60 gsm. The paper web in substantially free of latex or formaldehyde-evolving agents. The paper web comprises 0.1-2 weight% (weight%) of PARC, 0.05-2 weight% of catalyst and 0.05-3 weight% of a debonder. The paper web is a creped tissue or a premoistened wipe.

EXTENSION ABSTRACT:

EXAMPLE - Standard TAPPI handsheets (60 gsm) were prepared from a bleached virgin northern softwood kraft pulp. PARC solution was hand sprayed onto a sheet, and an aqueous solution having a weight equal to the dry weight of the sheet. The aqueous solution included (i) BELCLENE DP80, a terpolymer of maleic acid, vinyl acetate, and ethyl acetate, (ii) BELCLENE DP60, a terpolymer of maleic acid, vinyl acetate and ethyl acetate, or (iii) polymaleic acid (PMA). The solution also included sodium hypophosphite (SHP) as a catalyst, with one part of SHP for each two parts of polymeric reactive compound. The solutions included the polymer at an appropriate concentration. A solution of 2 weight% of polymer yielded a sheet containing 2 weight% of polymer when the sheet was dry. Sheets were uniformly sprayed with the solution. After spraying, the sheet was dried at 80degreesC for 6 hours to

substantially dry the sheet but not cure the polymeric reactive compound. The dried, treated sheet was stored before the polymeric reactive compound was cured. The sheets were cured in a Pro-Tronix forced air convection oven, at 180degreesC for 3 minutes. Polymer to fiber weight ratio, dry strength, wet strength, wet:dry ratio, wet total energy absorbed of the handsheets were evaluated and found to be 4%, 5808 g/inch, 4165 g/inch, 71.7% and 14.98 gcm/cm2, respectively.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A10-E14; A12-S05S; A12-V04; D08-B09; D09-C06; F05-A06B; F05-A06C

L30 ANSWER 11 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-328672 [34] WPIX
DOC. NO. CPI: C2001-100813 [34]
TITLE: Manufacture of high wet performance paper web used as disposable consumer products, involves treating web with aqueous solution of polymeric anionic reactive compound followed by flash curing treated web
DERWENT CLASS: A87; D22; F08; F09
INVENTOR: LINDSAY J D; SUN T
PATENT ASSIGNEE: (KIMB-C) KIMBERLY-CLARK WORLDWIDE INC
COUNTRY COUNT: 92

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2001031124	A1	20010503	(200134)*	EN	34[0]	
US 6264791	B1	20010724	(200146)	EN		
AU 2001010863	A	20010508	(200149)	EN		
MX 2002004055	A1	20021001	(200370)	ES		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001031124	A1	WO 2000-US28463	20001013
US 6264791	B1	US 1999-425810	19991025
MX 2002004055	A1	WO 2000-US28463	20001013
AU 2001010863	A	AU 2001-10863	20001013
MX 2002004055	A1	MX 2002-4055	20020423

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001010863	A	Based on	WO 2001031124 A
MX 2002004055	A1	Based on	WO 2001031124 A

PRIORITY APPLN. INFO: US 1999-425810 19991025
INT. PATENT CLASSIF.:
IPC RECLASSIF.: D04H0001-64 [I,A]; D04H0001-64 [I,C]; D21H0021-14 [N,C]; D21H0021-20 [N,A]; D21H0025-00 [I,C]; D21H0025-06 [I,A]

BASIC ABSTRACT:
WO 2001031124 A1 UPAB: 20060117
NOVELTY - A web comprising cellulosic papermaking fibers is treated with an aqueous solution of polymeric anionic reactive

compound (PARC). The treated web is then flash cured so that covalent bonds are formed between the PARC and cellulosic fibers. Thus, high wet performance paper web is manufactured.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (i) High wet performance web; (ii) Absorbent article comprising the paper web; (iii) Premoistened tissue comprising the paper web.

USE - For use as disposable consumer products and industrial or commercial products like premoistened tissues, paper towels, bath tissue, facial tissue, wet wipes, absorbent pads, intake webs in absorbent articles such as diapers, bed pads, meat and poultry pads, and feminine care pads.

ADVANTAGE - The wet performance of paper web is improved by applying polymeric anionic reactive compounds to cellulosic fibrous web followed by curing the reactive compounds to cross-link the cellulose fibers. The paper web has high wet resiliency, high wet strength and high wet:dry tensile strength ratio.

TECHNOLOGY FOCUS:

TEXTILES AND PAPER - Preferred Process: The web is formed by depositing aqueous slurry of papermaking fibers on moving fabric, and dewatering the slurry. The web is treated with an aqueous solution of PARC by coating, printing or spraying. The web is optionally treated with a chemical debonder. The flash curing of treated web is carried out by heating the web at above 150degreesC for less than 1 minute (preferably less than 5 sec, more preferably less than 1 sec). Alternately, the flash curing of web is carried out by exposing the web to a gas heated at 200-350degreesC (preferably, 250-320degreesC) for less than 1 min, or by impinging the heated gas on the surface of web, or by passing heated gas through the web, or by exposing the web to infrared rays, or by applying microwave energy or radiofrequency energy to the web. The PARC enables cross-linking of cellulosic fibers. Preferred Composition: The PARC comprises polymeric compound having repeating units containing 2 or more anionic functional groups (such as carboxylic acids which are on adjacent carbons and are capable of forming cyclic anhydride) which covalently bond to the hydroxyl groups of the cellulosic fibers. 0.3-8 weight % (weight%) (preferably, 0.7-2 weight%) of aqueous solution of PARC (which is a polymer comprising maleic acid) is applied to the dried web. The PARC treated web is dried to 90% or more at less than 150degreesC, before flash curing. The aqueous solution of PARC comprises a catalyst selected from alkali metal hypophosphites, alkali metal phosphites, alkali metal polyphosphonates, alkali metal phosphates and alkali metal sulfonates. The aqueous solution is free of formaldehyde or cross-linking agents that evolve formaldehyde. The PARC has molecular weight of 5000 or less (preferably, 500-2000), pH of 3 or more (preferably, 4 or more) and viscosity of 100 centipoise or less (preferably, 10 centipoise or less) at 25degreesC and can be dissolved in 50 weight% of water. Preferred Properties: The wet tensile strength index of the treated and cured paper is about 0.7 Nm/g. The wet:dry ratio of the treated and cured paper is 20% (preferably, 40%). The paper

web
(which is free from latex) has a basic weight of 40-60 grams per square meter (gsm) and has a wet tensile strength of 200 g/3 in.

EXTENSION ABSTRACT:

EXAMPLE - 42.5 gsm tissue web (suitable for use as hand towel) was produced from 0.5% consistency slurry of bleached northern softwood fibers on a pilot paper machine using an uncreped, through-air dried process. The web was dried on the through drying fabric by heated air, to a final dryness of 98%. The resulting paper web had a thickness of 0.3 mm and air permeability of 60 cfm (30.5 cm3/cm2/s). The aqueous solution containing terpolymer of maleic anhydride, vinyl acetate, and ethyl acetate, 2% of PARC BELCLENE DP80 (RTM) and 1% of sodium hypophosphite (as catalyst) was sprayed onto the web with a spray bottle. After spraying, the web was dried at 80degreesC for 6 hrs. The dried, treated web was wrapped in foil and shipped to the facility having APT-8 curing unit, where the dried web was cured by exposure to hot air (260-315degreesC) passing through the web for 0.35-2 sec. The dry tensile strength (along machine direction) of web at 260degreesCx0.5 and 316degreesCx 0.5 sec were 4671 and 4314, respectively. The wet tensile strength (along machine direction) of the web at 260degreesCx0.5 sec and 316degreesCx2.5 sec were 1138 and 2192, respectively. The wet:dry tensile strength ratio (%) of the web at 260degreesCx0.5 sec and 316degreesCx2.5 sec were 24.4% and 50.8%, respectively.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A11-B05D; A11-C02; A12-V03A; A12-V03C1; A12-W06; D09-C; D09-C06; F04-C01; F04-E04; F05-A06B; F05-A06C

L30 ANSWER 12 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-498957 [44] WPIX
DOC. NO. CPI: C2000-149643 [44]
DOC. NO. NON-CPI: N2000-369891 [44]
TITLE: Woven floor coverings useful in carpet, tile or carpeted mat comprises a backing and a cross-linking agent
DERWENT CLASS: A14; A17; A28; A84; F03; P73
INVENTOR: EVANS P D; SCHILLING L H
PATENT ASSIGNEE: (COLJ-C) COLLINS & AIKMAN FLOORCOVERINGS INC
COUNTRY COUNT: 85

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000040400	A1	20000713	(200044)*	EN	25[2]	
AU 2000024845	A	20000724	(200052)	EN		
US 6162748	A	20001219	(200102)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000040400	A1	WO 1999-US30767	19991222
US 6162748	A CIP of	US 1995-388986	19950215
US 6162748	A	US 1998-221426	19981228
AU 2000024845	A	AU 2000-24845	19991222

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000024845 A	Based on	WO 2000040400 A

PRIORITY APPLN. INFO: US 1998-221426 19981228
US 1995-388986 19950215
INT. PATENT CLASSIF.:
IPC RECLASSIF.: B32B0005-12 [I,A]; B32B0005-12 [I,C]; D06N0007-00 [I,A]; D06N0007-00 [I,C]

BASIC ABSTRACT:

WO 2000040400 A1 UPAB: 20060116

NOVELTY - A woven textile surface covering comprises a first layer having a decorative face surface and a back surface which is formed from interwoven warp and weft yarns having interstices and a second layer formed from a resin composition having a yarn engaging surface, an opposing back surface and a cross-linking agent .

DETAILED DESCRIPTION - A woven textile surface covering(1) comprises a first layer having a decorative face surface and a back surface which is formed from interwoven warp and weft yarns defining interstices between them and a second layer formed from a resin composition having a yarn engaging surface and an opposing back surface. At least a portion of yarn engaging surface occupies interstices. The resin composition(2) further includes a cross-linking agent.

An INDEPENDENT CLAIM is also included for preparation of (1).

USE - For floor covering, carpet, tile or a carpeted mat.

ADVANTAGE - The cross-linking agent increases the ability of the resin composition layer to hold the warp and weft yarns by reducing the possibility of delamination. The cross-linking agent coupled with resin composition layer is capable of wetting, penetrating and encapsulating the wear of the carpet, improves the seam integrity of the carpet reduces edge ravel and increases adhesion properties.

DESCRIPTION OF DRAWINGS - The figure shows a cross-sectional view of a woven floor covering

woven floor covering (10)
woven carpet layer (15)
resin composition layer (20) backing layer (25)
releasable adhesive layer (30) release cover (33)
warp yarns (35)
weft yarns. (40)

TECHNOLOGY FOCUS:

MECHANICAL ENGINEERING - Preparation: (1) is prepared by (a) applying a resin composition to a woven layer formed from interwoven warp and weft yarn, (b) penetrating at least a portion of warp and weft yarns with (2) and (c) heating (2) after application to the woven layer by crosslinking woven layer with (2).

Preferred Crosslinking Agent: The crosslinking agent comprises a melamine compound. The crosslinking agent is an aromatic isocyanurate having isocyanate groups for reacting with hydroxyl groups forming a chemical bond between warp, weft yarns and crosslinking agent .

Preferred Surface Covering: (1) further comprises a backing layer bonded to back surface of the second layer. The backing layer is a foamed polymer or copolymer. (1) further comprises a releasable adhesive layer(preferably oleophobic pressure adhesive) bonded to the backing layer. (1) further comprises a release cover on releasable adhesive layer. The back surface is heated to provide the adhesion properties to bond the second layer to the backing layer. The backing layer is bitumen, recycled waste polymeric materials and/or blends.

ORGANIC CHEMISTRY - Preferred Resin Composition: (2) is derived from at least one monomer selected from acrylic compounds, vinyl compounds, chlorinated vinyl compounds, styrene, butadiene, ethylene, butene and/or blends. (2) further comprises a mono or di-substituted 5-12C alkyl phthalate(15 - 60)weight% of vinyl chloride monomer. (2) chemically bonds to at least a portion of warp and weft yarns. (2) has carboxylic acid groups for reacting with amine groups forming a chemical bond between nylon and resin composition.

POLYMERS - The warp and weft yarns are made of nylon having amine groups or polyester having hydroxyl groups. The vinyl compound is polyvinyl chloride, polyvinylidene chloride, polyethylene chloride, polyvinyl acetate and/or polyvinyl acetal.

Preferred Method: The penetration of at least a portion of warp and weft yarns includes heating (1) at a temperature from 135 - 175 degrees C. The heated (1) layer comprises applying radiant heat to (1) layer. The bonding of the backing layer to (1) layer uses heat from the heated resin composition layer.

EXTENSION ABSTRACT:

SPECIFIC COMPOUNDS - Urethane, ethylene, propylene, isobutylene or vinyl chloride are specifically claimed as backing layers.

EXAMPLE - A woven carpet was prepared on a commercially available weaving apparatus. A resin composition layer comprised(parts per hundred resin) the following components: GEON 137(RTM; copolymer)(70), GEON 180(RTM; homopolymer)(30), Exxon L9P(plasticizer)(72), CPC BZ 205-D(stabilizer)(1) and CYMEL 303(RTM; crosslinker(5). The resin composition layer was applied to the back surface of the woven carpet, heated in an oven at 325 - 350 degrees F. A backing layer was then applied to the resin composition layer and heated at 325 - 400 degrees F. No results were given.

FILE SEGMENT: CPI; GMPI
MANUAL CODE: CPI: A08-C01; A08-D01; A11-A02A; A11-B05; A11-C02C; A12-D02; A12-S05F; A12-S05U; F02-A03A; F03-D03; F03-E01; F04-B02; F04-D04; F04-F03

L30 ANSWER 13 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1999-132581 [11] WPIX
DOC. NO. CPI: C1999-038913 [11]
DOC. NO. NON-CPI: N1999-096549 [11]
TITLE: Electronic network with geometry defined by fibres containing nucleotide chains - and related electronic circuits, junctions, wires, etc., for production of miniaturised microelectronic and logic circuits
DERWENT CLASS: A26; A85; D16; L03; T01

INVENTOR: BEN-JOSEPH G; BEN-YOSEPH G; BRAUN E; EICHEN Y; SIVAN U

PATENT ASSIGNEE: (BENJ-I) BEN-JOSEPH G; (BRAU-I) BRAUN E; (EICH-I) EICHEN Y; (SIVA-I) SIVAN U; (TECR-C) TECHNION RES & DEV FOUND LTD

COUNTRY COUNT: 80

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 9904440	A1	19990128	(199911)*	EN	86[17]	
AU 9882397	A	19990210	(199925)	EN		
EP 998759	A1	20000510	(200027)	EN		
CN 1264498	A	20000823	(200063)	ZH		
JP 2001510922	W	20010807	(200150)	JA	93	
IL 121312	A	20010913	(200158)	EN		
AU 749432	B	20020627	(200254)	EN		
MX 2000000386	A1	20011001	(200274)	ES		
US 20020171079	A1	20021121	(200279)	EN		
RU 2213393	C2	20030927	(200371)	RU		
EP 1492172	A1	20041229	(200502)	EN		
US 6946675	B2	20050920	(200562)	EN		
US 20050214806	A1	20050929	(200564)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9904440 A1		WO 1998-IL329	19980714
IL 121312 A		IL 1997-121312	19970714
AU 9882397 A		AU 1998-82397	19980714
AU 749432 B		AU 1998-82397	19980714
CN 1264498 A		CN 1998-807205	19980714
EP 998759 A1		EP 1998-932493	19980714
EP 1492172 A1	Div Ex	EP 1998-932493	19980714
EP 998759 A1		WO 1998-IL329	19980714
JP 2001510922 W		WO 1998-IL329	19980714
US 20020171079 A1		WO 1998-IL329	19980714
RU 2213393 C2		WO 1998-IL329	19980714
US 6946675 B2		WO 1998-IL329	19990128
JP 2001510922 W		JP 2000-503562	19980714
RU 2213393 C2		RU 2000-103269	19980714
MX 2000000386 A1		MX 2000-386	20000110
US 20020171079 A1		US 2000-462171	20000327
US 6946675 B2		US 2000-462171	20000327
EP 1492172 A1		EP 2004-77478	19980714
US 20050214806 A1		US 2004-985961	20041112

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 749432 B	Previous Publ	AU 9882397 A
EP 1492172 A1	Div ex	EP 998759 A
AU 9882397 A	Based on	WO 9904440 A
EP 998759 A1	Based on	WO 9904440 A
JP 2001510922 W	Based on	WO 9904440 A
AU 749432 B	Based on	WO 9904440 A

RU 2213393 C2 Based on WO 9904440 A
US 6946675 B2 Based on WO 9904440 A

PRIORITY APPLN. INFO: IL 1997-121312 19970714
INT. PATENT CLASSIF.:
MAIN: G06F015-80
SECONDARY: H01L051-20
IPC RECLASSIF.: C12Q0001-68 [I,A]; C12Q0001-68 [I,C]; G06F0015-76 [I,C]; G06F0015-80 [I,A]; G06N0003-00 [I,C]; G06N0003-12 [I,A]; G11C0013-02 [I,A]; G11C0013-02 [I,C]; H01L0021-00 [I,A]; H01L0021-00 [I,C]; H01L0029-66 [I,A]; H01L0029-66 [I,C]; H01L0049-00 [I,A]; H01L0049-00 [I,C]; H01L0051-00 [I,A]; H01L0051-00 [N,A]; H01L0051-00 [I,C]; H01L0051-00 [N,C]; H01L0051-05 [I,A]; H01L0051-05 [I,C]; H01L0051-10 [I,A]; H01L0051-30 [I,A]; H01L0051-40 [I,A]

BASIC ABSTRACT:
WO 1999004440 A1 UPAB: 20060115 An electronic network having a geometry defined by at least one fibre comprising one or more nucleotide chains (I) is new.
Also new are:
(1) electronic circuit containing such a network; (2) junction between two or more wires in which the end of each wire next to the junction comprises a (I) bound to another chain in the junction;
(3) junction between a conductor (a fibre with one or more (I)) and an electrically conducting interface component; (4) junction similar to (3) between some component of an electronic circuit and an interface component in which (I) is attached to one component and bound, by biomolecular interaction, with a linker attached to the other component; (5) any component of the new network; (6) wire comprising a (I) fibre chemically or physically modified by binding to it an electrically conducting substance (A) so that a current can flow along the fibre;
(7) field effect transistor (FET) consisting of this wire and serving as a gate; and
(8) kits and reagents for making the network, junctions or components.
(I) can include chemically modified nucleotides, allowing binding between fibres or binding to a linker or other component. Especially, the modification includes introduction of a specific binding component, e.g. of the biotin-(strept)avidin, sugar-lectin, etc., pairs. In the junction of (2), binding is by SSI, e.g. using a nucleic acid binding protein or specific binding pair as above, and (I) is modified covalently, e.g. via peptide or disulphide bond, or non-covalently.
Suitable (A) include silver, gold, cobalt, etc., or a cluster or particle of metal or semiconductor.
USE - The networks are used to make miniaturised microelectronic and logic circuits.
ADVANTAGE - Self-assembly properties of (I) are used to create networks of predefined geometry.

DOCUMENTATION ABSTRACT:
WO9904440
An electronic network having a geometry defined by at least one fibre comprising one or more nucleotide chains (I) is

new.

Also new are:

(1) electronic circuit containing such a network;

(2) junction between two or more wires in which the end of each wire next to the junction comprises a (I) bound to another chain in the junction;

(3) junction between a conductor (a fibre with one or more (I)) and an electrically conducting interface component;

(4) junction similar to (3) between some component of an electronic circuit and an interface component in which (I) is attached to one component and bound, by biomolecular interaction, with a linker attached to the other component;

(5) any component of the new network;

(6) wire comprising a (I) fibre chemically or physically modified by binding to it an electrically conducting substance (A) so that a current can flow along the fibre;

(7) field effect transistor (FET) consisting of this wire and serving as a gate; and

(8) kits and reagents for making the network, junctions or components.

USE

The networks are used to make miniaturised microelectronic and logic circuits.

ADVANTAGE

Self-assembly properties of (I) are used to create networks of predefined geometry.

PREPARATION

The network is particularly formed by self-assembly, based on chemical complementation and molecular recognition properties, between (I) and a second (I) or sequence- or domain-specific complexing agent.

EXAMPLE

Two gold electrodes were deposited on a passivated glass coverslip, then each wetted with a micron-sized droplet of aqueous solutions containing different 12-mer oligo-nucleotides, derivatised with a disulphide group at the 3'-end. After reaction, the coverslip was rinsed and covered with a solution containing a 16 μm long fragment of lambda phage DNA with sticky ends complementary to the attached oligo-nucleotides. The DNA was stretched to allow hybridisation to occur.

The stretched DNA was an insulator, but was made conductive by (i) chemical deposition of silver ions by base exchange and complex formation; (ii) formation of nanometre-sized silver aggregates by reduction with hydroquinone (HQ); and then (iii) using these aggregates as nucleation sites for development from an acidic solution of HQ and silver ions, resulting in a silver coating along the length of the DNA.

The voltage/current characteristics of the coated wire were determined; initially these were highly non-linear with a zero-conduction plateau, but after passing a high current through the wire these characteristics obeyed Ohm's Law closely.

PREFERRED NETWORK

The network includes a wire or electronic component, particularly at least two (I) connected at a junction by sequence-specific interaction (SSI). At least one (I) has bound to it an (A), i.e. substance, molecule or cluster (of atoms,

molecules
or particles), attached through linkers that themselves bind to (I) by SSI. (I) are assembled to networks on the basis of SSI, optionally functionalised with (A), or by sequence- or domain-specific interactions. At least one (I) may have at least one part bound to a semiconducting substance, particularly one to a p-type material and the other to an n-type material to form a p/n junction. Optionally (I) have one or more polymeric segments linked to them.

Suitable interface components are metal electrodes and other network components are switches; bipolar, single-electron or field effect transistors; (light-emitting) diodes; capacitors; resistors; conductors; insulators or inductors, and may be bound to a poly(phenylene vinylene) derivative to provide a light-producing component.

PREFERRED MATERIALS

(I) can include chemically modified nucleotides, allowing binding between fibres or binding to a linker or other component. Especially, the modification includes introduction of a specific binding component, e.g. of the biotin-(strept)avidin, sugar-lectin, etc., pairs. In the junction of (2), binding is by SSI, e.g. using a nucleic acid binding protein or specific binding pair as above, and (I) is modified covalently, e.g. via peptide or disulphide bond, or non-covalently.

Suitable (A) include silver, gold, cobalt, etc., or a cluster or particle of metal or semiconductor.

FILE SEGMENT: CPI; EPI
MANUAL CODE: CPI: A12-E07; A12-E07C; A12-W11L; D05-H10; L03-H03B
EPI: T01-M02

L30 ANSWER 14 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1993-378806 [48] WPIX
DOC. NO. CPI: C1993-168142 [48]
TITLE: High fastness textile printing pastes - crosslinked using modified poly:isocyanate(s), modified polycarbodiimide(s) or di- or higher-functional polyepoxide(s)
DERWENT CLASS: A25; A87; E13; F06; G02
INVENTOR: LAAS H; REIFF H; TRAEUBEL H; TRAUBEL H; WIGGER H
PATENT ASSIGNEE: (FARB-C) BAYER AG
COUNTRY COUNT: 6

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 571867	A1	19931201	(199348)*	DE	11[0]	
DE 4217716	A1	19931202	(199349)	DE	10[0]	
JP 06192608	A	19940712	(199432)	JA	10	
EP 571867	B1	19960731	(199635)	DE	8[0]	
DE 59303352	G	19960905	(199641)	DE		
US 5556935	A	19960917	(199643)	EN	8[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 571867 A1		EP 1993-108041	19930517
DE 4217716 A1		DE 1992-4217716	19920529
DE 59303352 G		DE 1993-59303352	19930517
EP 571867 B1		EP 1993-108041	19930517
DE 59303352 G		EP 1993-108041	19930517
US 5556935 A Cont of		US 1993-66454	19930524
JP 06192608 A		JP 1993-145357	19930526
US 5556935 A Cont of		US 1994-241926	19940512
US 5556935 A		US 1995-440286	19950512

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 59303352 G	Based on	EP 571867 A

PRIORITY APPLN. INFO: DE 1992-4217716 19920529
INT. PATENT CLASSIF.:
MAIN: C09D011-10
IPC RECLASSIF.: C08G0018-00 [I,C]; C08G0018-08 [I,A]; C08G0018-10 [I,A]; C08G0018-28 [I,A]; C08G0018-62 [I,A]; C08G0018-72 [I,A]; C08G0018-73 [I,A]; C08G0018-75 [I,A]; C08G0018-77 [I,A]; C08G0018-78 [I,A]; C08G0018-79 [I,A]; C08G0018-80 [I,A]; C09D0011-10 [I,A]; C09D0011-10 [I,C]; C09D0175-00 [I,A]; C09D0175-00 [I,C]; C09D0175-04 [I,A]; C09D0175-04 [I,C]; D06P0001-44 [I,C]; D06P0001-54 [I,A]

BASIC ABSTRACT:

EP 571867 A1 UPAB: 20060108 Use is claimed as crosslinkers for textile printing paste binders of (A) polyisocyanate mixts. having an ave. NCO functionality of 1.8-4.2, a content of (cyclo) aliphatic-bonded NCO gps. of 12-21.5 weight% and a polyether chain-bonded content of ethylene oxide (EO) units of 2-20 weight% in polyether chains having an average of 5-70 EO units, or (B) isocyanate derivs. containing an average 0.8-30 carbodiimide(-N=C-N-) gps/mol. at a carbodiimide gp. content of 2-30 weight% and having 5-200 meq/100 g. chemically -bonded sulphonate gps. and opt. also up to 25 weight% (based on weight of (B)) of EO units bonded in polyether chains, or (C) bisglycidyl-diphenylpropane-2,2 or polyepoxides with at least 3 epoxide gps./mol.

ADVANTAGE - The pastes show good fastness on heat treatment at below 100 deg.C and crosslinkers (A), (B) and (C) are free of the problems associated with prior-art crosslinkers (i.e. HCHO emission, difficulty in control of the number of reactive gps. and dispersibility difficulties).

FILE SEGMENT: CPI
MANUAL CODE: CPI: A05-A02; A05-G03; A08-D; A08-D04A; A12-B02; E07-A03B; F03-F33; G02-A04A

L30 ANSWER 15 OF 15 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1991-321657 [44] WPIX
DOC. NO. CPI: C1991-139022 [21]
TITLE: Highly hydrophilic polymeric moulding for clothes, etc. - prepared by treating moulding with D-glucosamine or its oligomer, or chitosan in

presence of functional gp. containing cpd.
DERWENT CLASS: A18; A28; A87; A96; D22; F06
INVENTOR: MATSUKAWA S; MIZUTA Y
PATENT ASSIGNEE: (KATA-N) KATAKURA CHIKKARIN CO LTD
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 03215533	A	19910920	(199144)*	JA		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 03215533	A	JP 1989-301987	19891122
JP 03215533	A	JP 1990-293663	19901101

PRIORITY APPLN. INFO: JP 1990-293663 19901101
INT. PATENT CLASSIF.:
IPC RECLASSIF.: C08J0007-00 [I,C]; C08J0007-12 [I,A]; D06M0101-00 [N,A]; D06M0101-16 [N,A]; D06M0101-18 [N,A]; D06M0101-30 [N,A]; D06M0101-32 [N,A]; D06M0101-34 [N,A]; D06M0013-00 [I,C]; D06M0013-02 [I,A]; D06M0013-322 [I,A]; D06M0013-325 [I,A]; D06M0013-338 [I,A]; D06M0013-372 [I,A]; D06M0015-01 [I,C]; D06M0015-03 [I,A]

BASIC ABSTRACT:

JP 03215533 A UPAB: 20050502 Moulding includes chemically bonded D-glucosamine or its oligomer or chitosan or its deriv, through functional gps. introduced on the surface of the moulding at least partially.

Preparation is carried out by treating a polymeric moulding after introduction of functional gp. or in the presence of the functional gp. containing cpd. with D-glucosamine or its oligomer or chitosan or its derivative.

Specifically, the polymeric moulding comprises polyamide, polyester, polyurethane or PVC. The functional gp. is at least 1 of carboxyl gp., aldehyde gp., chloro gp. and chlorocarbonyl gp.. The moulding is woven cloth, knitted cloth, film, tube, fibre or filament. The functional gp. containing cpd. is crosslinking agent. The polyester moulding is previously modified with amine cpd.. USE/ADVANTAGE - Used for underwear, under-clothes, antimicrobial e socks, stocking, sweat absorbing clothes, artificial blood vessel, dialysis tube, immunity adsorption material, etc.. It has the chitosan component fixed on the surface of prods.. @(7pp Dwg.No.0/0)

FILE SEGMENT: CPI
MANUAL CODE: CPI: A08-S08; A10-E01; A11-C04D; A12-G; D09-A02; D09-C01B; D09-C02; F03-C

=> fil hcap
FILE 'HCAPLUS' ENTERED AT 15:18:28 ON 12 DEC 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 12 Dec 2007 VOL 147 ISS 25
FILE LAST UPDATED: 11 Dec 2007 (20071211/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> fil compend
FILE 'COMPENDEX' ENTERED AT 15:18:31 ON 12 DEC 2007

FILE LAST UPDATED: 10 DEC 2007   <20071210/UP>
FILE COVERS 1970 TO DATE.

<<< SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
    THE BASIC INDEX >>>

=> fil japio
FILE 'JAPIO' ENTERED AT 15:18:34 ON 12 DEC 2007

FILE LAST UPDATED: 29 OCT 2007   <20071029/UP>
FILE COVERS APRIL 1973 TO JULY 26, 2007

>>> GRAPHIC IMAGES AVAILABLE <<<

=> fil text
FILE 'TEXTILETECH' ENTERED AT 15:18:37 ON 12 DEC 2007

FILE LAST UPDATED: 12 SEP 2003   <20030912/UP>
FILE COVERS 1978 TO MAY 2003.

THIS FILE IS A STATIC FILE WITH NO UPDATES

=> fil wtext
FILE 'WTEXTILES' ENTERED AT 15:18:41 ON 12 DEC 2007

FILE LAST UPDATED: 12 DEC 2007 <20071212/UP>
FILE COVERS 1970 TO DATE.

=> d l57 iall 1-23

L57 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:164708 HCAPLUS Full-text
DOCUMENT NUMBER: 144:234543
ENTRY DATE: Entered STN: 23 Feb 2006
TITLE: Compositions, finish, and treating textiles to impart wrinkle resistance, softness and hydrophilicity
INVENTOR(S): Offord, David A.; Hu, Cheng
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
US PATENT CLASSIF.: 008115510
CLASSIFICATION: 40-9 (Textiles and Fibers)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006037150	A1	20060223	US 2005-209251	200508 22
WO 2006023853	A1	20060302	WO 2005-US29781	200508 22

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:	US 2004-603720P	P	200408 23
	US 2004-618270P	P	200410 12

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

US 2006037150	INCL	008115510
	IPCI	C11D0003-00 [I,A]
	IPCR	C11D0003-00 [I,A]; C11D0003-00 [I,C]
	NCL	008/115.510
	ECLA	C11D001/62; C11D003/00B3; C11D003/32B; C11D003/37B12; C11D003/37C2
WO 2006023853	IPCI	D06M0013-432 [I,A]; D06M0013-02 [I,A]; D06M0015-227 [I,A]; D06M0015-21 [I,C*]; D06M0015-643 [I,A]; D06M0015-647 [I,A]; D06M0015-37 [I,C*]; D06M0013-46 [I,A]; D06M0013-00 [I,C*]
	IPCR	D06M0013-00 [I,C]; D06M0013-432 [I,A]; D06M0013-02 [I,A]; D06M0013-46 [I,A]; D06M0015-21 [I,C]; D06M0015-227 [I,A]; D06M0015-37 [I,C]; D06M0015-643 [I,A]; D06M0015-647 [I,A]
	ECLA	D06M013/02; D06M013/432; D06M013/46; D06M015/227; D06M015/643D; D06M015/647

ABSTRACT:
The finish composition is used in treatment of textiles to impart wrinkle resistance and softness while maintaining the natural hydrophilicity of the substrate. The treatment of linear polymers, ***yarns*** , fibers, webs, meshes, fabrics and other fibrous substrates is provided by a textile finish that resists wrinkles and remains soft to the touch. The treatment or finishing process comprises (a) contacting the substrate with a ***crosslinking*** agent capable of forming covalent ***bonds*** between adjacent cellulose mols., and (b) simultaneously or sequentially contacting the substrate with a hydrophilic softener combination comprising a mixture ≥2 softener components selected from polyethylene, a hydrophilic quaternary cationic compound, and a hydrophilic silicone; where the softener components become mech. or covalently bound to the substrate such that the softener components are detectable after five detergent washes.

SUPPL. TERM: textile crosslinking finishing hydrophilic softener

INDEX TERM: Polysiloxanes, uses
Quaternary ammonium compounds, uses
ROLE: TEM (Technical or engineered material use); USES
(Uses)
(com.; crosslinking and finishing textiles to impart wrinkle resistance, softness and hydrophilicity)

INDEX TERM: Textiles
(cotton-polyester; crosslinking and finishing textiles to impart wrinkle resistance, softness and hydrophilicity)

INDEX TERM: Textiles
(cotton; crosslinking and finishing textiles to impart wrinkle resistance, softness and hydrophilicity)

INDEX TERM: Creaseproofing
Crosslinking agents
Fabric finishing agents

Fabric softeners
(crosslinking and finishing
textiles to impart wrinkle resistance,
softness and hydrophilicity)
INDEX TERM: Clothing
(shirts; crosslinking and finishing
textiles to impart wrinkle resistance,
softness and hydrophilicity)
INDEX TERM: 1854-26-8, DMDHEU 1854-26-8 1854-26-8D, DMDHEU,
glycol-modified 9002-88-4, Polyethylene
876564-47-5, Permafresh TG
ROLE: TEM (Technical or engineered material use);
USES
(Uses)
(crosslinking and finishing textiles to
impart wrinkle resistance, softness and
hydrophilicity)

L57 ANSWER 2 OF 23 WORLD TEXTILES COPYRIGHT 2007 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2006:2075825 WTEXTILES Full-text
TITLE: Functionalization of yarn and textile products
INVENTOR: Thornton N.; Sigrist H.; Crevoisier F.; Chai Gao H.; Bruinink A.; Raschle P.
CORPORATE SOURCE: N. Thornton, Reddie and Grose, 16 Theobalds Road, London WC1X 8PL, United Kingdom.
SOURCE: Extracts from European Patent Applications, Part 1B: Primary Industry, Fixed Constructions, Mining, (07 JUN 2006), 22/23 (2373)
ISSN: 0943-1268
Priority Information: Germany, 0319929, 26 Aug 2003
PATENT INFORMATION: EP 1664416
DOCUMENT TYPE: Journal; Patent
COUNTRY (OF PUBLICATION): Germany, Federal Republic of
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT: Methods of chemical and bioche ical functionalisation of yarn and textile products are described. A yarn or textile product is contacted with a linker molecule comprising two or more photochemically activ table chemical groups and a non-tinker molecule having a desired property. Photochemical activation of the chemical groups causes covalent attachment of the nonlinker molecule to the yarn or textile product by means of the linker molecule in a single step. The methods are particularly useful for immobilisation to yarn or textile of biomolecules that are susceptible to denaturation. Use of linker molecules derived from proteins or polysaccharides further minimises denaturation of the biomolecule. CLASSIFICATION CODE: 75.21 YARNS: PATENTS
CONTROLLED TERM: yarn manufacture; chemical composition; polysaccharide; chemical process

L57 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:800017 HCAPLUS Full-text
DOCUMENT NUMBER: 146:360455
ENTRY DATE: Entered STN: 13 Aug 2006

TITLE: Production of cross-linked PET fibrous substrates via electrospinning
AUTHOR(S): Baker, Darren A.; Brown, Philip J.
CORPORATE SOURCE: School of Materials Science and Engineering, Clemson University, Clemson, SC, 29634, USA
SOURCE: ACS Symposium Series (2006), 918(Polymeric Nanofibers), 173-187
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 40-7 (Textiles and Fibers)
ABSTRACT:
Appropriate azide crosslinking agents have been synthesized and used as additives in polymer solns. that can be electrospun to produce nanofiber and microfiber substrates. These azides essentially react to crosslink, functionalize and covalently ***bind*** PET polymer chains. Electrospinning mixts. of PET with these additives enables fiber modification during or after the electrospinning process as heat can be used to initiate the crosslinking reaction. Modification of nanofiber/microfiber substrates was done by thermal post-spin treatments. This study demonstrates the effectiveness of the technique in modifying 100% PET electrospun substrates. The research shows how the process inherently changes the properties of the electrospun fibers including fiber Tg, melt temperature and how different azides over a series of concns. affect the fundamental thermal properties of the fibers. The motivation for crosslinking PET electrospun materials was to examine methods that could assist with material structural stability, thermal or mech.

SUPPL. TERM: disulfonyl azide crosslinker polyester fiber electrospinning heat posttreatment property
INDEX TERM: Polyester fibers, preparation
ROLE: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crosslinked; production of cross-linked PET fibrous substrates via electrospinning and study of their properties)
INDEX TERM: Spinning of fibers
(electro; production of cross-linked PET fibrous substrates via electrospinning and study of their properties)
INDEX TERM: Azides
ROLE: TEM (Technical or engineered material use); USES (Uses)
(fiber crosslinkers; production of cross-linked PET fibrous substrates via electrospinning and study of their properties)
INDEX TERM: Crosslinking agents
Microstructure
(fiber; production of cross-linked PET fibrous substrates via electrospinning and study of

their properties)
INDEX TERM: Crystallinity
Crystallization temperature
Thermal properties
(production of cross-linked PET fibrous substrates via
electrospinning and study of their properties)
INDEX TERM: Polyesters, preparation
ROLE: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(production of cross-linked PET fibrous substrates via
electrospinning and study of their properties)
INDEX TERM: 4547-69-7DP, 1,3-Benzenedisulfonyl azide, reaction products with polyethylene terephthalate
24324-06-9DP, 1,6-Hexanedisulfonyl azide, reaction products with polyethylene terephthalate
25038-59-9DP, crosslinked with azides 311817-52-4DP,
2,6-Naphthalenedisulfonyl azide, reaction products with polyethylene terephthalate
ROLE: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(fiber; production of cross-linked PET
fibrous substrates via electrospinning and study of
their properties)
INDEX TERM: 920-66-1
ROLE: NUU (Other use, unclassified); USES (Uses)
(production of cross-linked PET fibrous substrates via
electrospinning and study of their properties)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD.
REFERENCE(S):
(1) Baker, D; J Appl Polym Sci 2002, V84, P1309 HCAPLUS
(2) Baker, D; J Appl Polym Sci 2002, V83, P1517 HCAPLUS
(3) Baker, D; J Appl Polym Sci 2003, V88, P1556 HCAPLUS
(4) Baker, D; Journal of Applied Polymer Science 2001,
V79(6), P1092 HCAPLUS
(5) Doshi, J; Journal of Electrostatics 1995, V35, P151 HCAPLUS
(6) Fong, H; Polymer 1999, V40, P4585 HCAPLUS
(7) Hohman, M; Physics of Fluids 2001, V13, P2201 HCAPLUS
(8) Shin, Y; Applied Physics Letters 2001, V78(8), P1149 HCAPLUS

L57 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:356670 HCAPLUS Full-text
DOCUMENT NUMBER: 138:339665
ENTRY DATE: Entered STN: 09 May 2003
TITLE: Finishing cellulosic fibers for functional cellulosic fibers
with increased tensile strength and washfast silk-like handle by treating cellulosic fibers with mixtures of water-soluble

dichlorotriazine compounds, sericins and/or silk
fibroins, and water-soluble diamines and/or alkanolamines for crosslinking of silk proteins and amines with cellulose molecules through the medium of the triazine ring

INVENTOR(S): Hagiwara, Toshio; Yamada, Eiji
PATENT ASSIGNEE(S): Japan
SOURCE: PCT Int. Appl., 13 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: D06M013-358
SECONDARY: D06M015-15; D06M101-06
CLASSIFICATION: 40-9 (Textiles and Fibers)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003038181	A1	20030508	WO 2002-JP2527	200203 15
W: KR				
JP 2003138482	A	20030514	JP 2001-373408	200111 01

PRIORITY APPLN. INFO.: JP 2001-373408 A 200111 01

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003038181	ICM	D06M013-358
	ICS	D06M015-15; D06M101-06
	IPCI	D06M0013-358 [ICM,7]; D06M0013-00 [ICM,7,C*]; D06M0015-15 [ICS,7]; D06M0015-01 [ICS,7,C*]; D06M0101-06 [ICS,7]
	IPCR	D06M0013-00 [I,C*]; D06M0013-332 [I,A]; D06M0013-358 [I,A]; D06M0013-368 [I,A]; D06M0015-01 [I,C*]; D06M0015-15 [I,A]; D06M0101-06 [N,A]
	ECLA	D06M013/332; D06M013/358; D06M013/368; D06M015/15
JP 2003138482	IPCI	D06M0013-368 [ICM,7]; D06M0013-332 [ICS,7]; D06M0013-358 [ICS,7]; D06M0013-00 [ICS,7,C*]; D06M0015-15 [ICS,7]; D06M0015-01 [ICS,7,C*]; D06M0101-06 [ICS,7]
	IPCR	D06M0013-00 [I,C*]; D06M0013-332 [I,A]; D06M0013-358 [I,A]; D06M0013-368 [I,A]; D06M0015-01 [I,C*]; D06M0015-15 [I,A]; D06M0101-06 [N,A]

ABSTRACT:
Functional cellulosic fibers are prepared by treating cellulosic

fibers with compns. containing H2O-soluble dichlorotriazine compds., sericins and/or silk fibroins, and H2O-soluble diamines and/or alkanolamines to cause bonding of silk proteins and amines with cellulose
mols. by covalent bonds through the medium of the triazine ring. A cotton broadcloth was padded with a solution containing H2O
32, Na2CO3 1.35, aqueous 10% 2,6-dichloro-4-oxy-s-triazine sodium salt 8,
sericin powder 0.8, diethanolamine 0.8, permeation agent 0.8, and urea 4 parts to pickup 100%, dried, heat-treated 20 min at 105° under steam, washed, and dried to give a washfast fabric exhibiting dimensional change -0.3 and -0.2%, resp., in the warp and filling directions and showing tensile strength 683 and 523 N, resp., in the warp
and filling directions and equilibrium moisture absorption 8.1% at 20 ± 2° and 65 ± 5% relative humidity and showing improved handle.

SUPPL. TERM: cotton fabric finishing silk like handle enhancement; rayon fabric finishing silk like handle enhancement; fibroin finish cotton fabric silk like handle enhancement; sericin finish cellulosic fabric silk like handle enhancement; diethanolamine crosslinking agent cellulosic fiber silk like handle enhancement; dichlorotriazine compd crosslinker cellulosic fiber silk like handle enhancement

INDEX TERM: Alcohols, uses
ROLE: MOA (Modifier or additive use); USES (Uses)
(amino, crosslinkers; finishing cellulosic fibers for increased tensile strength and silk-like handle by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins and/or silk fibroins and diamines or alkanolamines)

INDEX TERM: Fibers
ROLE: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(cellulosic; finishing cellulosic fibers for increased tensile strength and silk-like handle
by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins
and/or silk fibroins and diamines or alkanolamines)

INDEX TERM: Textiles
(cotton; finishing cellulosic fibers for increased tensile strength and silk-like handle by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins and/or silk fibroins and diamines or alkanolamines)

INDEX TERM: Amines, uses

ROLE: MOA (Modifier or additive use); USES (Uses)
(diamines, crosslinkers; finishing cellulosic fibers for increased tensile strength and silk-like handle by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins and/or silk fibroins and diamines or alkanolamines)

INDEX TERM: Rayon, uses
ROLE: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(fabrics, Tencel; finishing cellulosic fibers for increased tensile strength and silk-like handle by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins and/or silk fibroins and diamines or alkanolamines)

INDEX TERM: Crosslinking
Fabric finishing
(finishing cellulosic fibers for increased tensile strength and silk-like handle by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins and/or silk fibroins and diamines or alkanolamines)

INDEX TERM: Fibroin
Sericins
ROLE: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(finishing cellulosic fibers for increased tensile strength and silk-like handle by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins and/or silk fibroins and diamines or alkanolamines)

INDEX TERM: 111-42-2, Diethanolamine, uses 2736-18-7
ROLE: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(crosslinker; finishing cellulosic fibers for increased tensile strength and silk-like handle by treating cellulosic fibers with mixts. of water-soluble dichlorotriazine compds., sericins and/or silk fibroins and diamines or alkanolamines)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S): (1) Nippon Tenmo Senshoku Kabushiki Kaisha; JP 2002030567 A 2002 HCAPLUS
(2) Seiren Co Ltd; JP 2588445 A 1996

L57 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:671379 HCAPLUS Full-text
DOCUMENT NUMBER: 139:198756
ENTRY DATE: Entered STN: 28 Aug 2003
TITLE: Finishing cellulose fiber materials with vegetable proteins for lasting temperature retention properties and wear comfort

properties
by treating cellulose fiber materials with aqueous compositions containing vegetable proteins, dichlorotriazine compounds and diamines

INVENTOR(S): Yamada, Eiji; Hagiwara, Toshio
PATENT ASSIGNEE(S): Shohikagaku Kenkyusho K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: D06M015-15
SECONDARY: D06M013-332; D06M013-358; D06M013-368; D06M101-06
CLASSIFICATION: 40-9 (Textiles and Fibers)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003239175	A	20030827	JP 2002-79686	200202 14

PRIORITY APPLN. INFO.: JP 2002-79686 200202 14

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003239175	ICM	D06M015-15
	ICS	D06M013-332; D06M013-358; D06M013-368; D06M101-06
	IPCI	D06M0015-15 [ICM,7]; D06M0015-01 [ICM,7,C*]; D06M0013-332 [ICS,7]; D06M0013-358 [ICS,7]; D06M0013-368 [ICS,7]; D06M0013-00 [ICS,7,C*]; D06M0101-06 [ICS,7]
	IPCR	D06M0015-01 [I,C*]; D06M0015-15 [I,A]; D06M0013-00 [I,C*]; D06M0013-332 [I,A]; D06M0013-358 [I,A]; D06M0013-368 [I,A]; D06M0101-06 [N,A]

ABSTRACT:
The finished cellulose fiber materials are prepared by treating cellulose fiber materials with aqueous compns. containing vegetable proteins or mixts. of vegetable proteins and animal proteins, H2O-soluble diamines, alkanolamines, and H2O-soluble dichlorotriazine compds. to cause ***covalent*** bonding of the proteins and amines with cellulose mols. via the triazine ring to give cellulose fiber ***functional*** materials with improved temperature retention properties and tensile strength. A knit of a blend comprising Tencel rayon and 7% polyurethane fibers was treated with an aqueous composition containing 10%

2,6-dichloro-4-oxy-s-triazine sodium salt 15, Na2SO4 20, Na2CO3 4.6, NaHCO3 0.7, and soybean protein 2.5 parts for 60 min at 90-95°, washed, and dried to give a knit showing dimensional change -0.5 and -1.55%, resp. in the warp and filling directions on washing the ***fabric*** according to the method of JIS L-0217-105 and showing no fibrillation on abrading the surface of the knit for 1000 cycles by a specified method and exhibiting equilibrium moisture content at 20° and 65 ± 5% relative humidity 10.2% and showing good temperature retention properties and wear comfort properties.

SUPPL. TERM: cellulose fiber finish vegetable protein temp retention property enhancement; dichlorotriazine compd crosslinking agent
cellulosic fiber finish vegetable protein; rayon fiber vegetable protein finish temp retention property enhancement; soybean protein finish
cellulose fiber temp retention property enhancement; wear comfort property enhancement
cellulose fiber finish vegetable protein

INDEX TERM: Alcohols, uses
ROLE: MOA (Modifier or additive use); USES (Uses)
(amino, crosslinking agents; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: Polyurethane fibers
ROLE: TEM (Technical or engineered material use); USES
(Uses)
(blends with rayon; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: Fibers
ROLE: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(cellulosic; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: Amines, uses
ROLE: MOA (Modifier or additive use); USES (Uses)
(diamines, crosslinking agents; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber

materials with aqueous compns. containing vegetable
proteins, dichlorotriazine compds. and diamines)
INDEX TERM: Linum usitatissimum
(fiber; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)
INDEX TERM: Proteins
Sericins
ROLE: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(finishes; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)
INDEX TERM: Fibroin
ROLE: TEM (Technical or engineered material use); USES (Uses)
(finishes; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)
INDEX TERM: Cotton fibers
Crosslinking
Fabric finishing
Thermal insulators
(finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)
INDEX TERM: Acetate fibers, uses
Rayon, uses
ROLE: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)
INDEX TERM: Clothing
(insulated; finishing cellulose fibers for lasting temperature retention properties and wear

comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: Bicarbonates
Hydroxides (inorganic)
Phosphates, uses
Silicates, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(pH adjustors; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: Glycine max
Vegetable
(proteins from; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: Rayon, uses
ROLE: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(reconstituted, Tencel; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: 111-42-2, Diethanolamine, uses 2736-18-7 583630-76-6
ROLE: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(crosslinking agent; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

INDEX TERM: 9004-35-7, Cellulose acetate
ROLE: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(fiber; finishing cellulose fibers for lasting temperature retention properties and wear comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine

compds. and diamines)
INDEX TERM: 144-55-8, Sodium bicarbonate, uses 497-19-8, Sodium carbonate, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(pH adjustor; finishing cellulose fibers for lasting temperature retention properties and wear
comfort properties by treating cellulose fiber materials with aqueous compns. containing vegetable proteins, dichlorotriazine compds. and diamines)

L57 ANSWER 6 OF 23 COMPENDEX COPYRIGHT 2007 EEI on STN
ACCESSION NUMBER: 2004(9):1014 COMPENDEX Full-text
TITLE: Antibacterial properties of cotton fabrics treated with Chitosan.
AUTHOR: Zhang, Zitao (Dong Hua University, Shanghai 200051, China); Chen, Liang; Ji, Jinmin; Huang, Yanliu; Chen, Donghui
SOURCE: Textile Research Journal v 73 n 12 December 2003
2003.p 1103-1106
SOURCE: Textile Research Journal v 73 n 12 December 2003
2003.p 1103-1106
CODEN: TRJOA9 ISSN: 0040-5175
PUBLICATION YEAR: 2003
DOCUMENT TYPE: Journal
TREATMENT CODE: Theoretical; Experimental
LANGUAGE: English
ABSTRACT: Chitosan is used to treat cotton fabrics to impart antibacterial activities. The effect of concentration, molecular weight, and degree of deacetylation of chitosan on antibacterial activity to Escherichia coli and the Hay bacillus is investigated. Bacteria reduction is evaluated using the modified Quinn method. Escherichia coli is effectively inhibited at 0.3 g/l chitosan solution and the Hay bacillus at 0.5 g/l. To bond chitosan to fabric chemically, glutaric dialdehyde is chosen as the crosslinking agent. Cotton fabrics treated with glutaric dialdehyde and chitosan show a good ability to inhibit bacteria reproduction. IR spectra of the surface of cotton fabrics and SEM pictures of fibers are presented. 8 Refs. CLASSIFICATION CODE: 819.5 Textile Products and Processing; 461.9
Biology; 931.2 Physical Properties of Gases, Liquids and Solids; 931.3 Atomic and Molecular Physics; 802.2 Chemical Reactions; 802.3 Chemical Operations
CONTROLLED TERM: *Cotton fabrics; Molecular weight; Acetylation; Surface properties; Concentration (process); Infrared spectroscopy; Crosslinking; Escherichia coli
SUPPLEMENTARY TERM: Antibacterial activities

L57 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:792548 HCAPLUS Full-text
DOCUMENT NUMBER: 137:296150
ENTRY DATE: Entered STN: 18 Oct 2002
TITLE: Modifying processing methods for fiber materials using silk proteins
INVENTOR(S): Yamada, Eiji; Kanehisa, Keiichiro

PATENT ASSIGNEE(S): Kanehisa K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: D06M015-15
SECONDARY: D06M013-358
CLASSIFICATION: 40-7 (Textiles and Fibers)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002302874	A	20021018	JP 2001-137956	200103 30
JP 3366000	B2	20030114		

PRIORITY APPLN. INFO.: JP 2001-137956 200103 30

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002302874	ICM	D06M015-15
	ICS	D06M013-358
	IPCI	D06M0015-15 [ICM,7]; D06M0015-01 [ICM,7,C*]; D06M0013-358 [ICS,7]; D06M0013-00 [ICS,7,C*]
	IPCR	D06M0015-01 [I,C*]; D06M0015-15 [I,A]; D06M0013-00 [I,C*]; D06M0013-358 [I,A]

ABSTRACT:
Fibers, sericin, and/or silk fibroin are covalently ***bonded*** with dichlorotriazines and/or cyanuric chloride (I). Thus, sericin was treated with I to give dichloro-sericino-S-triazine (II), and cotton fibers treated with II showed good moisture retention.

SUPPL. TERM: cotton fiber sericin cyanuric chloride reaction; chlorotriazine cotton fiber sericin reaction; moisture retention improvement cotton fiber
INDEX TERM: Wool
(angora; modifying fiber materials using silk proteins and dichlorotriazines and cyanuric chloride)
INDEX TERM: Crosslinking agents
Hemp fibers
Wool
(modifying fiber materials using silk proteins and dichlorotriazines and cyanuric chloride)
INDEX TERM: Acetate fibers, uses
Synthetic fibers
ROLE: IMF (Industrial manufacture); PRP (Properties);

TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(modifying fiber materials
using silk proteins and dichlorotriazines and
cyanuric chloride)

INDEX TERM: Humidity
(modifying fiber materials
using silk proteins and dichlorotriazines and
cyanuric chloride for improved moisture retention)

INDEX TERM: Hair
(mohair; modifying fiber
materials using silk proteins and
dichlorotriazines
and cyanuric chloride)

INDEX TERM: Fur
(reaction products with cyanuric chloride and
dichlorotriazines and silk proteins;
modifying fiber materials using
silk proteins and dichlorotriazines and cyanuric
chloride)

INDEX TERM: Natural fibers
ROLE: IMF (Industrial manufacture); PRP (Properties);
TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(reaction products with cyanuric chloride and
dichlorotriazines and silk proteins;
modifying fiber materials using
silk proteins and dichlorotriazines and cyanuric
chloride)

INDEX TERM: Cotton fibers
(reaction products with cyanuric chloride and
sericin; modifying fiber
materials using silk proteins and
dichlorotriazines
and cyanuric chloride)

INDEX TERM: Sericins
ROLE: IMF (Industrial manufacture); PRP (Properties);
TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(reaction products with fibers and
cyanuric chloride; modifying
fiber materials using silk proteins and
dichlorotriazines and cyanuric chloride)

INDEX TERM: Fibroin
ROLE: IMF (Industrial manufacture); PRP (Properties);
TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(reaction products with fibers and
dichlorotriazines; modifying
fiber materials using silk proteins and
dichlorotriazines and cyanuric chloride)

INDEX TERM: Proteins
ROLE: IMF (Industrial manufacture); PRP (Properties);
TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(silk, reaction products with cyanuric chloride
and
dichlorotriazines and fibers;
modifying fiber materials using

silk proteins and dichlorotriazines and cyanuric chloride)

INDEX TERM: 9004-35-7P, Cellulose acetate
ROLE: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fibers; modifying fiber materials using silk proteins and dichlorotriazines and cyanuric chloride)

INDEX TERM: 108-77-0DP, Cyanuric chloride, reaction products with fibers and silk proteins 2736-18-7DP, 2,4-Dichloro-6-hydroxy-s-triazine sodium salt, reaction products with fibers and silk proteins
ROLE: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(modifying fiber materials using silk proteins and dichlorotriazines and cyanuric chloride)

L57 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:64224 HCAPLUS Full-text
DOCUMENT NUMBER: 134:132894
ENTRY DATE: Entered STN: 26 Jan 2001
TITLE: Nanoparticle-based permanent treatments for textiles using covalent-bonded polymer nanobeads containing releasing agent
INVENTOR(S): Soane, David S.; Offord, David A.; Ware, William, Jr.; Linford, Matthew R.; Green, Eric; Lau, Ryan
PATENT ASSIGNEE(S): Avantgarb, LLC, USA
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: D06M023-12
SECONDARY: D06P001-22; D06P001-00
CLASSIFICATION: 40-9 (Textiles and Fibers)
Section cross-reference(s): 5, 37, 41, 63
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001006054	A1	20010125	WO 2000-US40428	200007

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

US 2003013369 A1 20030116 US 2000-731431

200012 06

US 6607994 B2 20030819

PRIORITY APPLN. INFO.: US 1999-144485P P

199907 19

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PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001006054	ICM	D06M023-12
	ICS	D06P001-22; D06P001-00
	IPCI	D06M0023-12 [ICM,7]; D06P0001-22 [ICS,7]; D06P0001-00 [ICS,7]
	IPCR	D06M0016-00 [I,C*]; D06M0016-00 [I,A]; D06M0023-12 [I,C*]; D06M0023-12 [I,A]; D06P0001-00 [I,C*]; D06P0001-00 [I,A]; D06P0001-22 [I,A]
	ECLA	D06M016/00; D06M023/12; D06P001/00A4; D06P001/22T
AU 2000071360	IPCI	D06M0023-12 [ICM,7]; D06P0001-22 [ICS,7]; D06P0001-00 [ICS,7]
	IPCR	D06M0016-00 [I,C*]; D06M0016-00 [I,A]; D06M0023-12 [I,C*]; D06M0023-12 [I,A]; D06P0001-00 [I,C*]; D06P0001-00 [I,A];

		D06P0001-22 [I,A]
EP 1203118	IPCI	D06M0023-12 [ICM,6]; D06P0001-22 [ICS,6]; D06P0001-00 [ICS,6]
	IPCR	D06M0016-00 [I,C*]; D06M0016-00 [I,A]; D06M0023-12 [I,C*]; D06M0023-12 [I,A]; D06P0001-00 [I,C*]; D06P0001-00 [I,A]; D06P0001-22 [I,A]
US 2003013369	IPCI	D03D0015-00 [ICM,7]
	IPCR	D06M0016-00 [I,C*]; D06M0016-00 [I,A]; D06M0023-12 [I,C*]; D06M0023-12 [I,A]; D06P0001-00 [I,C*]; D06P0001-00 [I,A]; D06P0001-22 [I,A]
	NCL	442/181.000
	ECLA	D06M016/00; D06M023/12; D06P001/00A4; D06P001/22T

ABSTRACT:
This invention is directed to prepns. useful for the permanent or substantially permanent treatment of textiles and other webs. More particularly, the prepns. of the invention comprise an agent or other payload surrounded by or contained within a synthetic, polymer shell or matrix that is reactive to webs, to give textile -reactive beads or matrixes. By "textile-reactive" is meant that the payload bead will form a chemical covalent ***bond*** with the fiber, yarn, fabric, ***textile*** , finished goods (including apparel), or other web or substrate to be treated. The polymer shell or polymer network of the payload nanoparticle has a surface that includes functional groups for binding or attachment to the fibers of the textiles or other webs (such as denim fabrics) to be treated, to provide permanent attachment of the payload to the textiles, therefor improving colorfastness and resistance to fading. Alternatively, the surface of the nanobead includes functional groups that can bind to a ***linker*** mol. that will in turn bind or attach the bead to the ***fiber.*** The payload is selected from the group consisting of bioactive agents, anti-biol. agents, drugs, pharmaceuticals, sun-block agents, dyes (such as an indigo unreactive dye), pigments, scents, fragrances, insect repellents, fire retardant or suppressant chems., metallic reflector colloids, magnetic particles, thermochromic materials, heat-absorbing or heat-releasing phase change agents, fabric softeners, zeolites, and activated carbon. The shell can be made by polymerizing a polymeric set containing textile-reactive ***functional*** group and crosslinking ***agent.***

SUPPL. TERM: textile treatment covalent bonding reactive nanoparticle; controlled release indigo encapsulated nanoparticle denim fabric; antimicrobial sunscreen drug dye fragrance controlled release fabric

INDEX TERM: Textiles
(denim; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: Crosslinking agents
(in textile treatment by covalent -bonded polymer nanobeads containing releasing agent)

INDEX TERM: Polymers, uses
ROLE: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: Dyes
(indigo, unreactive, releasing agent; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: Colloids
(metallic reflector, releasing agent; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: Drug delivery systems
(nanoparticles, controlled-release; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: Antimicrobial agents
Drugs
Fabric softeners
Fireproofing agents
Heat-sensitive materials
Insect repellents
Magnetic particles
Odor and Odorous substances
Pigments, nonbiological
Sunscreens
Thermochromic materials
(releasing agent; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: Zeolites (synthetic), uses
ROLE: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process);
USES
(Uses)
(releasing agent; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: 7440-44-0, Activated carbon, uses
ROLE: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process);
USES
(Uses)
(activated, releasing agent; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

INDEX TERM: 482-89-3, Indigo
ROLE: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process);
USES
(Uses)

(dye, releasing agent; in textile treatment by covalent-bonded polymer nanobeads containing releasing agent)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD.

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L57 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:626402 HCAPLUS Full-text
DOCUMENT NUMBER: 131:258885
ENTRY DATE: Entered STN: 01 Oct 1999
TITLE: Hydrophobically modified cellulose textile and other materials and their preparation
INVENTOR(S): Soane, David S.; Offord, David A.
PATENT ASSIGNEE(S): Avantgarb, LLC, USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: D06M013-184
SECONDARY: D06M015-263
CLASSIFICATION: 40-9 (Textiles and Fibers)
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9949125	A2	19990930	WO 1999-US6382	199903 23
WO 9949125	A3	19991209		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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AU 9932007	A	19991018	AU 1999-32007	199903 23
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PRIORITY APPLN. INFO.: US 1998-80185P P

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01

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9949125	ICM	D06M013-184
	ICS	D06M015-263
	IPCI	D06M0013-184 [ICM,6]; D06M0013-00 [ICM,6,C*]; D06M0015-263 [ICS,6]; D06M0015-21 [ICS,6,C*]
	IPCR	C08B0003-00 [I,C*]; C08B0003-10 [I,A]; C08B0003-14 [I,A]; C08B0015-00 [I,C*]; C08B0015-00 [I,A]; D06M0013-00 [I,C*]; D06M0013-184 [I,A]; D06M0013-513 [I,A]; D06M0015-01 [I,C*]; D06M0015-03 [I,A]; D06M0015-05 [I,A]; D06M0015-11 [I,A]; D06M0015-21 [I,C*]; D06M0015-227 [I,A]; D06M0015-263 [I,A]; D06M0015-277 [I,A]; D06M0015-285 [I,A]; D06M0015-333 [I,A]; D06M0015-347 [I,A]; D06M0015-356 [I,A]; D06M0015-37 [I,C*]; D06M0015-643 [I,A]; D06M0023-00 [I,C*]; D06M0023-00 [I,A]; D06P0001-44 [N,C*]; D06P0001-653 [N,A]; D06P0005-02 [I,C*]; D06P0005-04 [I,A]
	ECLA	C08B003/10; C08B003/14; C08B015/00; D06M013/184; D06M013/513; D06M015/03; D06M015/05; D06M015/11; D06M015/227; D06M015/263; D06M015/277; D06M015/285; D06M015/333; D06M015/347; D06M015/356N; D06M015/643; D06M023/00; D06M023/00B; D06P005/04
CA 2324949	IPCI	D06M0013-184 [ICM,7]; D06M0015-05 [ICS,7]; D06M0015-01 [ICS,7,C*]; D06M0011-09 [ICS,7]; D06M0011-00 [ICS,7,C*]; D06M0015-263 [ICS,7]; D06M0015-277 [ICS,7]; D06M0015-21 [ICS,7,C*]; D06M0015-423 [ICS,7]; D06M0015-37 [ICS,7,C*]; D06M0013-432 [ICS,7]; D06M0013-513 [ICS,7]; D06M0013-517 [ICS,7]; D06M0013-00 [ICS,7,C*]
	IPCR	C08B0003-00 [I,C*]; C08B0003-10 [I,A]; C08B0003-14 [I,A]; C08B0015-00 [I,C*]; C08B0015-00 [I,A]; D06M0013-00 [I,C*]; D06M0013-184 [I,A]; D06M0013-513 [I,A]; D06M0015-01 [I,C*]; D06M0015-03 [I,A]; D06M0015-05 [I,A]; D06M0015-11 [I,A]; D06M0015-21 [I,C*]; D06M0015-227 [I,A]; D06M0015-263 [I,A]; D06M0015-277 [I,A]; D06M0015-285 [I,A]; D06M0015-333 [I,A]; D06M0015-347 [I,A]; D06M0015-356 [I,A]; D06M0015-37 [I,C*]; D06M0015-643 [I,A]; D06M0023-00 [I,C*]; D06M0023-00 [I,A]; D06P0001-44 [N,C*]; D06P0001-653 [N,A]; D06P0005-02 [I,C*]; D06P0005-04 [I,A]
AU 9932007	IPCI	D06M0013-184 [ICM]; D06M0013-00 [ICM,C*]; D06M0015-263 [ICS]; D06M0015-21 [ICS,C*]
	IPCR	D06M0013-00 [I,C*]; D06M0013-184 [I,A]; D06M0015-21 [I,C*]; D06M0015-263 [I,A]
GB 2355729	IPCI	D06M0013-184 [ICM]; D06M0013-00 [ICM,C*]
	IPCR	C08B0003-00 [I,C*]; C08B0003-10 [I,A]; C08B0003-14 [I,A]; C08B0015-00 [I,C*]; C08B0015-00 [I,A]; D06M0013-00 [I,C*]; D06M0013-184 [I,A]; D06M0013-513 [I,A];

		D06M0015-01 [I,C*]; D06M0015-03 [I,A]; D06M0015-05 [I,A]; D06M0015-11 [I,A]; D06M0015-21 [I,C*]; D06M0015-227 [I,A]; D06M0015-263 [I,A]; D06M0015-277 [I,A]; D06M0015-285 [I,A]; D06M0015-333 [I,A]; D06M0015-347 [I,A]; D06M0015-356 [I,A]; D06M0015-37 [I,C*]; D06M0015-643 [I,A]; D06M0023-00 [I,C*]; D06M0023-00 [I,A]; D06P0001-44 [N,C*]; D06P0001-653 [N,A]; D06P0005-02 [I,C*]; D06P0005-04 [I,A]
	ECLA	C08B003/10; C08B003/14; C08B015/00; D06M013/184; D06M013/513; D06M015/03; D06M015/05; D06M015/11; D06M015/227; D06M015/263; D06M015/277; D06M015/285; D06M015/333; D06M015/347; D06M015/356N; D06M015/643; D06M023/00; D06M023/00B; D06P005/04
US 6485530	IPCI	D06M0013-328 [ICM,7]; D06M0013-00 [ICM,7,C*]; D06P0005-06 [ICS,7]; D06P0005-02 [ICS,7,C*]
	IPCR	C08B0003-00 [I,C*]; C08B0003-10 [I,A]; C08B0003-14 [I,A]; C08B0015-00 [I,C*]; C08B0015-00 [I,A]; D06M0013-00 [I,C*]; D06M0013-184 [I,A]; D06M0013-513 [I,A]; D06M0015-01 [I,C*]; D06M0015-03 [I,A]; D06M0015-05 [I,A]; D06M0015-11 [I,A]; D06M0015-21 [I,C*]; D06M0015-227 [I,A]; D06M0015-263 [I,A]; D06M0015-277 [I,A]; D06M0015-285 [I,A]; D06M0015-333 [I,A]; D06M0015-347 [I,A]; D06M0015-356 [I,A]; D06M0015-37 [I,C*]; D06M0015-643 [I,A]; D06M0023-00 [I,C*]; D06M0023-00 [I,A]; D06P0001-44 [N,C*]; D06P0001-653 [N,A]; D06P0005-02 [I,C*]; D06P0005-04 [I,A]
	NCL	008/494.000; 008/116.100; 008/120.000; 008/127.600; 008/196.000; 008/552.000
	ECLA	C08B003/10; C08B003/14; C08B015/00; D06M013/184; D06M013/513; D06M015/03; D06M015/05; D06M015/11; D06M015/227; D06M015/263; D06M015/277; D06M015/285; D06M015/333; D06M015/347; D06M015/356N; D06M015/643; D06M023/00; D06M023/00B; D06P005/04
US 2002152560	IPCI	D06P0001-00 [ICM,7]
	IPCR	C08B0003-00 [I,C*]; C08B0003-10 [I,A]; C08B0003-14 [I,A]; C08B0015-00 [I,C*]; C08B0015-00 [I,A]; D06M0013-00 [I,C*]; D06M0013-184 [I,A]; D06M0013-513 [I,A]; D06M0015-01 [I,C*]; D06M0015-03 [I,A]; D06M0015-05 [I,A]; D06M0015-11 [I,A]; D06M0015-21 [I,C*]; D06M0015-227 [I,A]; D06M0015-263 [I,A]; D06M0015-277 [I,A]; D06M0015-285 [I,A]; D06M0015-333 [I,A]; D06M0015-347 [I,A]; D06M0015-356 [I,A]; D06M0015-37 [I,C*]; D06M0015-643 [I,A]; D06M0023-00 [I,C*]; D06M0023-00 [I,A]; D06P0001-44 [N,C*]; D06P0001-653 [N,A]; D06P0005-02 [I,C*]; D06P0005-04 [I,A]
	NCL	008/494.000
	ECLA	C08B003/10; C08B003/14; C08B015/00; D06M013/184;

		D06M013/513; D06M015/03; D06M015/05; D06M015/11; D06M015/227; D06M015/263; D06M015/277; D06M015/285; D06M015/333; D06M015/347; D06M015/356N; D06M015/643; D06M023/00; D06M023/00B; D06P005/04
US 2002189024	IPCI	D06M0010-00 [ICM,7]
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	NCL	008/115.510
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US 2003051295	IPCI	D06P0001-00 [ICM,7]
	IPCR	C08B0003-00 [I,C*]; C08B0003-10 [I,A]; C08B0003-14 [I,A]; C08B0015-00 [I,C*]; C08B0015-00 [I,A]; D06M0013-00 [I,C*]; D06M0013-184 [I,A]; D06M0013-513 [I,A]; D06M0015-01 [I,C*]; D06M0015-03 [I,A]; D06M0015-05 [I,A]; D06M0015-11 [I,A]; D06M0015-21 [I,C*]; D06M0015-227 [I,A]; D06M0015-263 [I,A]; D06M0015-277 [I,A]; D06M0015-285 [I,A]; D06M0015-333 [I,A]; D06M0015-347 [I,A]; D06M0015-356 [I,A]; D06M0015-37 [I,C*]; D06M0015-643 [I,A]; D06M0023-00 [I,C*]; D06M0023-00 [I,A]; D06P0001-44 [N,C*]; D06P0001-653 [N,A]; D06P0005-02 [I,C*]; D06P0005-04 [I,A]
	NCL	008/115.510
	ECLA	C08B003/10; C08B003/14; C08B015/00; D06M013/184; D06M013/513; D06M015/03; D06M015/05; D06M015/11; D06M015/227; D06M015/263; D06M015/277; D06M015/285; D06M015/333; D06M015/347; D06M015/356N; D06M015/643; D06M023/00; D06M023/00B; D06P005/04

ABSTRACT:

A material comprising ≥1 modifiable functional groups is reacted with an activated hydrophobic acyl group in the presence of a hindered base, to covalently attach the hydrophobic acyl group to the modifiable functional groups on the material. More specifically, cellulose may be modified by reacting it with an acid chloride or acid anhydride including a hydrophobic acyl group, in the presence of a hindered base, such as tripentylamine (I), to attach the hydrophobic acyl

groups to the hydroxyls on the cellulose, to increase the hydrophobicity of the cellulose. The textiles have improved properties such as resistance, grease repellency, soil resistance and permanent press properties. Thus, cotton treated with palmitoyl chloride and acetyl chloride and I had surface tension 30 mN/m; vs. 72 mN/m for untreated cotton.

SUPPL. TERM: hydrophobically modified cellulosic fabric; water oil soil repellency modified cellulosic fabric; acyl chloride reaction cellulosic fabric; alkyl silane reaction cellulosic fabric; fluorocarbon reaction cellulosic fabric; crosslinking hydrophobic compd cellulosic fabric

INDEX TERM: Silanes
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(alkyl; modified denim textile having waterproofing property)

INDEX TERM: Textiles
(cotton; hydrophobically modified textile having waterproofing property)

INDEX TERM: Textiles
(denim, hydrophobically modified with palmitoyl chloride; hydrophobically modified denim textile having waterproofing property)

INDEX TERM: Hydrocarbons, reactions
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(fluoro; modified denim textile having waterproofing property)

INDEX TERM: Durable press finishing
Oilproofing
Soilproofing
Waterproofing
(hydrophobically modified denim textile having)

INDEX TERM: Wool
(hydrophobically modified textile having waterproofing property)

INDEX TERM: Clothing
Upholstery
(hydrophobically modified textile having waterproofing property in)

INDEX TERM: Crosslinking
(with hydrophobically modified dimethyloldihydroxyethyleneurea; modified textile having waterproofing property)

INDEX TERM: 1854-26-8, Dimethyloldihydroxyethyleneurea
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking; modified textile having waterproofing property)

INDEX TERM: 621-77-2, Tripentylamine
ROLE: NUU (Other use, unclassified); USES (Uses)
(modified denim textile having waterproofing property)

INDEX TERM: 112-67-4, Palmitoyl chloride
ROLE: RCT (Reactant); RACT (Reactant or reagent)

(modified denim textile having
waterproofing property)

L57 ANSWER 10 OF 23 COMPENDEX COPYRIGHT 2007 EEI on STN
ACCESSION NUMBER: 1999(48):5209 COMPENDEX Full-text
TITLE: Microfabrication of biosensors for neurotransmitter analysis.
AUTHOR: Tan, Weihong (Univ of Florida, Gainesville, FL, USA); Cordek, Julia; Liu, Xiaojing; Gross, Brooks; Liesenfeld, Bernd
MEETING TITLE: Proceedings of the 1999 Micro- and Nanofabricated Structures and Devices for Biomedical Environmental Applications II.
MEETING ORGANIZER: SPIE; IBOS
MEETING LOCATION: San Jose, CA, USA
MEETING DATE: 25 Jan 1999-26 Jan 1999
SOURCE: Proceedings of SPIE - The International Society for Optical Engineering v 3606 1999.p 2-9
SOURCE: Proceedings of SPIE - The International Society for Optical Engineering v 3606 1999.p 2-9
CODEN: PSISDG ISSN: 0277-786X
ISBN: 0-8194-3076-5
PUBLICATION YEAR: 1999
MEETING NUMBER: 55212
DOCUMENT TYPE: Journal
TREATMENT CODE: General Review
LANGUAGE: English
ABSTRACT: We have developed ultrasensitive biosensors for the analysis of neurotransmitters such as glutamate, GABA and lactate. These sensors have micrometer to submicrometer sizes. They are based on biomolecule immobilization on optical fiber probe surfaces.The miniaturized fiber probes are fabricated by either pulling or etching conventional optical fibers. For example, surface immobilized glutamate dehydrogenase (GDH) is being used for glutamate analysis.GDH has been directly immobilized onto an optical fiber probe surface through a new optical fiber sensor fabrication technique using covalent binding mechanisms. None of the direct or indirect physical confinement methods, such as mechanical confinement, gel trapping or membrane immobilization, has been used for the sensor preparation.An optical fiber surface is initially activated by silanization, which adds amine groups (-NH2) to the surface. We then affix functional groups -CHO to the optical fiber surface by employing a bifunctional cross- linking agent, glutaraldehyde. The amino acids of GDH enzyme molecules (or other biomolecules) readily attach to these free -CHO groups on the fiber surface. The sensor is able to detect its substrate, glutamate, by monitoring the fluorescence of reduced nicotinamide adenine dinucleotide (NADH), a product of the reaction between nicotinamide adenine dinucleotide (NAD plus) and glutamate. Similar procedures and principle have been used for the development of lactate and GABA sensors. Our biomolecule based biosensors have been applied to the study of single living cell neurophysiological responses. (Author abstract) 14 Refs. CLASSIFICATION CODE: 462.1 Biomedical Equipment (General); 741.1.2
Fiber Optics; 461.6 Medicine; 943.3 Special Purpose Instruments; 801.2 Biochemistry
CONTROLLED TERM: *Biosensors; Sensitivity analysis; Transmitters;
Probes; Cell immobilization; Molecular dynamics;
Semiconductor device manufacture; Optical

fiber fabrication; Neurophysiology; Medical applications
SUPPLEMENTARY TERM: Ultrasensitive biosensors; Neurotransmitter analysis; Single cell monitoring; Near field optics; Biomolecule immobilization; Glutamate dehydrogenase; Silanization
ELEMENT TERM: H*N; NH2; N cp; cp; H cp

L57 ANSWER 11 OF 23 TEXTILETECH COPYRIGHT 2007 Inst. of Textile Technology on STN
ACCESSION NUMBER: 639578 TEXTILETECH Full-text
DOCUMENT NUMBER: 200009227
TITLE: Reactive Dyes and Dyeing: A Critical Review.
AUTHOR: English R. J.; Lewis D. M.
CORPORATE SOURCE: Univ. of Leeds
SOURCE: Colour Science '98, Proceedings of the International Conference and Exhibition, Harrogate, April 1-3, 1998: Volume 2: Textile Dyeing and Printing, 2: 1+, 21 pages (1999). Reference(s): 33 refs.
DOCUMENT TYPE: Journal
LANGUAGE: English
NOTE: ITT Cat No. QC 495 .L4 C6 1999 v.2.
ABSTRACT: An overview of reactive dyes and dyeing processes addresses the dyeability of cellulosic fibers, the effect of different processing techniques, and cotton fiber modification. Reactive dyes account for 25 percent of all dyes sold in the United Kingdom. Past research has led to the development of dyes with lower salt requirements and multifunctional dyes with improved dye to fiber covalent bonding . Recent research focuses on dyes with nucleophilic side chains for dyeing reactive cellulosic fibers. Water soluble crosslinking agents offer potential advantages when applied with nucleophilic dyes. Although pretreating cotton fibers with reactive resins improves dye fixation, reactive dyeing of wool fibers results in fewer problems in coloration.
CLASSIFICATION CODE: D2 Coloration
SUBJECT HEADING: 1530 DYEING--CELLULOSE FIBERS: bibliographies, cellulosic fibers, color, Colour Science 1998. Volume 2, conference papers, cotton fibers, crosslinking, development, dyeing, fixation (dyes), multifunctional compounds, pretreatments, reactive dyes, resins, reviews
CONTROLLED TERM: ADVANTAGES; APPLYING; BIBLIOGRAPHIES; BONDING; CAUSES; CELLULOSIC FIBERS; COLOR; COLORS MATERIALS; CONFERENCE PAPERS; CONFERENCES; COTTON; COTTON FIBERS; CROSSLINKING; DEVELOPMENT; DIAGRAMS; DYEABILITY; DYEING; DYEING PROCESSES; DYES; EQUATIONS; FIBERS; FINISHING; FIXATION DYES; GRAPHS CHARTS; GREAT BRITAIN; IMPROVEMENT; MODIFICATIONS; MULTIFUNCTIONAL COMPOUNDS; PRETREATMENTS; PROBLEMS; PROCESSING; REACTIVE DYES; REQUIREMENTS; RESEARCH; RESEARCH AND DEVELOPMENT; RESINS; REVIEWS; SALTS; SOLUBILITY; TABLES DATA; TEXTILE RESEARCH; WATER; WATER SOLUBILITY; WOOL; WOOL FIBERS

L57 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:667137 HCAPLUS Full-text
DOCUMENT NUMBER: 123:58727
ENTRY DATE: Entered STN: 13 Jul 1995
TITLE: Process for modifying and dyeing of modified fiber materials, the modified and dyed fiber material and the use of modifying agents to modify fibers
INVENTOR(S): Eltz, von der, Andreas; Clauss, Joachim; Schrell, Andreas
PATENT ASSIGNEE(S): Hoechst A.-G., Germany
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
INT. PATENT CLASSIF.:
MAIN: D06P001-52
SECONDARY: D06P003-66; D06P003-82
CLASSIFICATION: 40-6 (Textiles and Fibers)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 636742	A2	19950201	EP 1994-111572	199407 25
EP 636742	A3	19960717		
EP 636742	B1	19981202		
R: CH, DE, FR, GB, IT, LI				
DE 4325783	A1	19950202	DE 1993-4325783	199307 31
US 5512064	A	19960430	US 1994-281840	199407 28
JP 07150477	A	19950613	JP 1994-178905	199407 29

PRIORITY APPLN. INFO.: DE 1993-4325783 A 199307 31

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 636742	ICM	D06P001-52
	ICS	D06P003-66; D06P003-82
	IPCI	D06P0001-52 [ICM,6]; D06P0001-44 [ICM,6,C*]; D06P0003-66 [ICS,6]; D06P0003-58 [ICS,6,C*]; D06P0003-82 [ICS,6]

	IPCR	D06P0001-39 [I,C*]; D06P0001-39 [I,A]; D06M0013-00 [I,C*]; D06M0013-02 [I,A]; D06M0013-12 [I,A]; D06M0013-123 [I,A]; D06M0013-192 [I,A]; D06M0013-224 [I,A]; D06M0015-37 [I,C*]; D06M0015-61 [I,A]; D06M0101-00 [N,A]; D06M0101-02 [N,A]; D06M0101-06 [N,A]; D06M0101-08 [N,A]; D06M0101-16 [N,A]; D06M0101-30 [N,A]; D06M0101-32 [N,A]; D06M0101-34 [N,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0003-58 [I,C*]; D06P0003-66 [I,A]; D06P0003-82 [I,C*]; D06P0003-82 [I,A]; D06P0005-00 [I,C*]; D06P0005-00 [I,A]; D06P0005-22 [I,C*]; D06P0005-22 [I,A]
	ECLA	D06P001/52D4; D06P003/66B; D06P003/66C; D06P003/82V5B2
DE 4325783	IPCI	D06M0015-61 [ICM,6]; D06M0015-53 [ICS,6]; D06M0015-37 [ICS,6,C*]; D06M0013-12 [ICS,6]; D06M0013-192 [ICS,6]; D06M0013-224 [ICS,6]; D06M0013-00 [ICS,6,C*]; D06P0001-39 [ICS,6]; D06P0001-38 [ICS,6]; D06P0003-872 [ICS,6]; D06P0003-82 [ICS,6,C*]; D06M0101-32 [ICI,6]; D06M0101-34 [ICI,6]; D06M0101-38 [ICI,6]; D06M0101-06 [ICI,6]; D06P0001-16 [ICA,6]; D06P0001-12 [ICA,6]; D06P0001-02 [ICA,6,C*]; D06P0001-22 [ICA,6]; D06P0001-00 [ICA,6,C*]; C09B0062-51 [ICA,6]; C09B0062-44 [ICA,6,C*]; C09B0062-245 [ICA,6]; C09B0062-04 [ICA,6]; C09B0062-02 [ICA,6,C*]; C09B0029-15 [ICA,6]; C09B0029-30 [ICA,6]; C09B0029-00 [ICA,6,C*]
	IPCR	D06P0001-39 [I,C*]; D06P0001-39 [I,A]; D06M0013-00 [I,C*]; D06M0013-02 [I,A]; D06M0013-12 [I,A]; D06M0013-123 [I,A]; D06M0013-192 [I,A]; D06M0013-224 [I,A]; D06M0015-37 [I,C*]; D06M0015-61 [I,A]; D06M0101-00 [N,A]; D06M0101-02 [N,A]; D06M0101-06 [N,A]; D06M0101-08 [N,A]; D06M0101-16 [N,A]; D06M0101-30 [N,A]; D06M0101-32 [N,A]; D06M0101-34 [N,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0003-58 [I,C*]; D06P0003-66 [I,A]; D06P0003-82 [I,C*]; D06P0003-82 [I,A]; D06P0005-00 [I,C*]; D06P0005-00 [I,A]; D06P0005-22 [I,C*]; D06P0005-22 [I,A]
US 5512064	IPCI	D06M0015-61 [ICM,6]; D06M0015-53 [ICS,6]; D06M0015-37 [ICS,6,C*]; D06P0001-38 [ICS,6]
	IPCR	D06P0001-39 [I,C*]; D06P0001-39 [I,A]; D06M0013-00 [I,C*]; D06M0013-02 [I,A]; D06M0013-12 [I,A]; D06M0013-123 [I,A]; D06M0013-192 [I,A]; D06M0013-224 [I,A]; D06M0015-37 [I,C*]; D06M0015-61 [I,A]; D06M0101-00 [N,A]; D06M0101-02 [N,A]; D06M0101-06 [N,A]; D06M0101-08 [N,A]; D06M0101-16 [N,A]; D06M0101-30 [N,A]; D06M0101-32 [N,A]; D06M0101-34 [N,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0003-58 [I,C*]; D06P0003-66 [I,A];

		D06P0003-82 [I,C*]; D06P0003-82 [I,A]; D06P0005-00 [I,C*]; D06P0005-00 [I,A]; D06P0005-22 [I,C*]; D06P0005-22 [I,A]
	NCL	008/541.000; 008/115.650; 008/116.400; 008/181.000; 008/542.000; 008/543.000; 008/551.000; 008/608.000; 008/918.000; 008/922.000; 008/924.000; 008/926.000; 008/DIG.017
	ECLA	D06P001/52D4; D06P003/66B; D06P003/66C; D06P003/82V5B2
JP 07150477	IPCI	D06M0015-61 [ICM,6]; D06M0015-37 [ICM,6,C*]; D06M0013-123 [ICS,6]; D06M0013-00 [ICS,6,C*]; D06P0001-39 [ICS,6]; D06P0005-00 [ICS,6]; D06P0005-22 [ICS,6]; D06M0101-04 [ICI,6]
	IPCR	D06P0001-39 [I,C*]; D06P0001-39 [I,A]; D06M0013-00 [I,C*]; D06M0013-02 [I,A]; D06M0013-12 [I,A]; D06M0013-123 [I,A]; D06M0013-192 [I,A]; D06M0013-224 [I,A]; D06M0015-37 [I,C*]; D06M0015-61 [I,A]; D06M0101-00 [N,A]; D06M0101-02 [N,A]; D06M0101-06 [N,A]; D06M0101-08 [N,A]; D06M0101-16 [N,A]; D06M0101-30 [N,A]; D06M0101-32 [N,A]; D06M0101-34 [N,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0003-58 [I,C*]; D06P0003-66 [I,A]; D06P0003-82 [I,C*]; D06P0003-82 [I,A]; D06P0005-00 [I,C*]; D06P0005-00 [I,A]; D06P0005-22 [I,C*]; D06P0005-22 [I,A]

ABSTRACT:
Title process comprises contacting the fiber with an amino ***group*** -containing polymer (AXA)n where A is a chemical ***bond*** or a methylene group, X is (CH2)m, CH2NR1CH2, or CH2OCH2, where m is 1-6, R1 is H or C1-4 alkyl, and n is 2-1000 and a bifunctional ***crosslinking*** agent ZQZ where Z is CHO, CH(OR1)2, CO2R1, COCl, SO3Cl, and Q is a phenylene group or (CH2)a where a is 0-4. The process allows anionic dyeing with a min. amount of electrolytes and in ***fiber*** reactive dyeing with a min. of alkali. A bleached, mercerized cotton textile was treated with polyethylenimine and glyoxal, dried, and 100 parts of the treated textile was dyed at 60° in a bath containing 2 parts of an azo sulfoethylsulfone reactive dye in the Na salt form containing 50% electrolyte to give a strong, level orange dyeing with good overall fastness properties.

SUPPL. TERM:	dyeing anionic crosslinking amino polymer; reactive dyeing electrolyte alkali low; glyoxal crosslinking anionic dyeing; polyethylenimine anionic dyeing; cotton reactive dyeing alkali low
INDEX TERM:	Crosslinking (modifying and dyeing of fiber materials)
INDEX TERM:	Dyeing (anionic, process for modifying fiber materials for low electrolyte)
INDEX TERM:	Dyeing (reactive, process for modifying fiber materials for low alkali)

INDEX TERM: 95-92-1, Diethyl Oxalate 105-53-3, Diethyl malonate
107-22-2, Glyoxal 110-15-6, Succinic acid,
processes
123-25-1, Diethyl succinate 141-82-2, Malonic acid,
processes 144-62-7, Oxalic acid, processes
ROLE: PEP (Physical, engineering or chemical
process);
PROC (Process)
(crosslinking agent;
modifying and dyeing of fiber
materials)
INDEX TERM: 9002-98-6, Polyethylenimine 25037-42-7,
Polypropylenimine
ROLE: TEM (Technical or engineered material use);
USES
(Uses)
(modifying and dyeing of fiber
materials)

L57 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:261062 HCAPLUS Full-text
DOCUMENT NUMBER: 118:261062
ENTRY DATE: Entered STN: 26 Jun 1993
TITLE: Method of bonding collagen to polyester
fibers, particularly Dacron
INVENTOR(S): Pachence, James M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 14 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C07K003-08
US PATENT CLASSIF.: 530356000
CLASSIFICATION: 63-7 (Pharmaceuticals)
Section cross-reference(s): 40
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5157111	A	19921020	US 1991-694729	199105 02

PRIORITY APPLN. INFO.: US 1991-694729 199105 02

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5157111	ICM	C07K003-08
	INCL	530356000
	IPCI	C07K0003-08 [ICM,5]
	IPCR	A61L0027-00 [I,C*]; A61L0027-34 [I,A]; C07K0014-435 [I,C*]; C07K0014-78 [I,A]; D06M0015-01 [I,C*]; D06M0015-15 [I,A]

NCL 530/356.000; 128/DIG.008; 428/373.000;
530/354.000; 623/001.470

ABSTRACT:
Chemical modification of polyester fiber is carried out for improving covalent binding of collagen to polyester fiber substrate which is useful in ligament prosthesis design with better initial strength and new fibrous tissue growth, etc. than a conventionally-used Dacron product. A process for the modification comprises steps of (a) hydrogenation (e.g. by NaBH4) of the CO groups of the polyester to OH groups, (b) conducting a transesterification (e.g. by Ph carbamate) including the addition of free amine groups, reacting with bifunctional agents (e.g. di-Me suberimidate), and treating with collagen.

SUPPL. TERM: ligament prosthesis collagen bound polyester fiber

INDEX TERM: Polyester fibers, uses
ROLE: USES (Uses)
(fabrics, modified with bound collagen, for ligament prostheses)

INDEX TERM: Ligament
Tendon
(modified polyester fiber-bound collagen for repair of)

INDEX TERM: Collagens, uses
ROLE: PREP (Preparation)
(modified polyester fiber -bound, for ligament prostheses, preparation of)

INDEX TERM: Prosthetic materials and Prosthetics
(modified polyester fibers containing bound collagen, for ligament repair, preparation of)

INDEX TERM: 25038-59-9DP, PET polyester, hydrogenated, transesterified with Ph carbamate, reaction products with crosslinkers and collagen
ROLE: PREP (Preparation)
(fibers, fabrics, preparation of, for ligament prostheses)

INDEX TERM: 16940-66-2, Sodium borohydride
ROLE: BIOL (Biological study)
(hydrogenation agents, in modification of polyester fibers for ligament prostheses)

INDEX TERM: 29878-26-0, Dimethyl suberimidate
ROLE: BIOL (Biological study)
(reaction with carbamate-transesterified hydrogenated polyester fibers with, in modification of polyester fibers for ligament prostheses)

INDEX TERM: 622-46-8, Phenyl carbamate
ROLE: BIOL (Biological study)
(transesterification of hydrogenated polyester fibers with, in modification of polyester fibers for ligament prostheses)

L57 ANSWER 14 OF 23 TEXTILETECH COPYRIGHT 2007 Inst. of Textile Technology on STN
ACCESSION NUMBER: 556223 TEXTILETECH Full-text

DOCUMENT NUMBER: 199202675
TITLE: TECHNIQUES FOR IMPROVING COLOR YIELD OF REACTIVE
DYES ON CELLULOSICS.
AUTHOR: Kamat S. Y.; Prasad A. K.
CORPORATE SOURCE: Sandoz
SOURCE: Colourage, 38, No. 11: 15-25 (Nov. 1991).
Reference(s): 60 refs.
CODEN: COLOBG
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT: Factors affecting the color yield of reactive dyes and techniques for improving color yield on cellulosic fibers are discussed. The chemical bonding that occurs during reactive dyeing is explained. The types of reactive dye groups are presented in a table that also includes information about the product's introduction, the trade name, the original manufacturer, and the type of fabric upon which the dye is used. Several techniques for improving color yield, including the mixed alkali system, the pad-steam method, fixation with sodium silicate, neutral dyeing, the use of super-heated steam for fixation, the use of humactants, solvent-aided methods, the use of reaction catalysts, the use of dye fabric crosslinking agents, and chemical modification of the cellulose, are described.
CLASSIFICATION CODE: D2 Coloration
SUBJECT HEADING: 1530 DYEING--CELLULOSE FIBERS:
reactive dyeing of cellulosics. improving the color yield
0710 CELLULOSE FIBERS: reactive dyeing of cellulosics. improving the color yield
0420 BIBLIOGRAPHIES: reactive dyeing of cellulosics. improving the color yield
CONTROLLED TERM: ALKALI TREATMENT; BIBLIOGRAPHIES; CATALYSTS; CELLULOSIC FABRICS; CELLULOSIC FIBERS; CHEMICAL MODIFICATION FIBERS; COLOR; CROSSLINKING; DIAGRAMS; DYEING; FIBERS; FINISHING; FIXATION DYES; PAD-STEAM DYEING PROCESSES; PH; PRODUCTS; REACTIONS CHEMICAL; REACTIVE DYES; SILICATES; SODIUM COMPOUNDS; SOLVENTS; STEAM; TABLES DATA; TRADEMARKS; YIELD

L57 ANSWER 15 OF 23 JAPIO (C) 2007 JPO on STN
ACCESSION NUMBER: 1990-109980 JAPIO Full-text
TITLE: HOLLOW FIBER MEMBRANE FOR IMMOBILIZING ENZYME
INVENTOR: ISHIZUKA HIROTOSHI; ITO MASAAKI; HIBINO TAKESHI;
SAHASHI HIROKO; SAIGA TAKESHI
PATENT ASSIGNEE(S): NITTO DENKO CORP
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 02109980	A	19900423	Heisei	C12N011-06

APPLICATION INFORMATION
STN FORMAT: JP 1988-262443 19881018
ORIGINAL: JP63262443 Showa
PRIORITY APPLN. INFO.: JP 1988-262443 19881018

SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1990
INT. PATENT CLASSIF.:
MAIN: C12N011-06
ABSTRACT:
PURPOSE: To maintain long-term high activity of enzyme immobilized membrane of hollow fiber without lowering water permeating performance of the membrane by supporting a water-soluble polymer containing at least two functional groups on a porous layer of hollow fiber membrane in a crosslinked state.
CONSTITUTION: A membrane material is dissolved in a mixed solvent of a polar solvent such as N-methyl-2-pyrrolidone to dissolve the membrane material such as aromatic polyolefin and a solvent such as ethylene glycol to be miscible with the solvent but not to dissolve the aromatic polyolefin to form a solution of membrane preparation. Then the solution is extruded by a double pipe type nozzle and coagulated to give a hollow fiber membrane. Then the membrane is impregnated with an aqueous solution of a water-soluble polymer such as polyethyleneimine and crosslinked with a crosslinking agent. Then a solution of enzyme is passed through the membrane and the enzyme is immobilized through a functional group by covalent bond to give an enzyme immobilized membrane. Consequently, the membrane has excellent water permeating performance and can be used for a long period of time without elimination of enzyme even in enzymatic reaction. COPYRIGHT: (C) 1990,JPO&Japio

L57 ANSWER 16 OF 23 JAPIO (C) 2007 JPO on STN
ACCESSION NUMBER: 1990-052726 JAPIO Full-text
TITLE: MANUFACTURE OF REINFORCED PLASTIC
INVENTOR: YAO MASAKI
PATENT ASSIGNEE(S): NISSAN MOTOR CO LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 02052726	A	19900222	Heisei	B29C067-14

APPLICATION INFORMATION
STN FORMAT: JP 1988-204169 19880817
ORIGINAL: JP63204169 Showa
PRIORITY APPLN. INFO.: JP 1988-204169 19880817
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1990
INT. PATENT CLASSIF.:
MAIN: B29C067-14
SECONDARY: C08J005-04
ABSTRACT:
PURPOSE: To omit work in which four yarn groups are woven by auxiliary yarn, and to improve productivity by superposing warp groups and weft groups, in which liquefied binding agents having resin melting properties are attached to multifilaments, while binding both groups to form a single laminating material and impregnating the laminating material with a liquefied resin containing a curing agent and curing the resin.
CONSTITUTION: Liquefied binding agents having resin melting properties are affixed to multifilaments 1, and warp groups 2, weft groups 3 and two kinds of oblique yarn groups 4, 5 composed

of the multifilaments 1, to which the binding agents are annexed, are superposed respectively while these warp groups 2, weft groups 3 and two kinds of oblique yarn groups 4, 5 are bound by binding agents, thus shaping a single laminating material 6. The laminating material 6 is impregnated with a liquefied resin including a curing agent, and the resin is cured. The binding agent is melted chemically on the impregnation of the epoxy resin containing the binding agent, and the binding agent, the curing agent, the epoxy resin and the multifilaments 1 constituting four yarn groups are bonded integrally and inseparably, thus manufacturing reinforced plastics.

L57 ANSWER 17 OF 23 TEXTILETECH COPYRIGHT 2007 Inst. of Textile Technology on STN

ACCESSION NUMBER: 595397 TEXTILETECH Full-text
DOCUMENT NUMBER: 199603624
TITLE: The Chemistry and Formulation of Latex Nonwoven Binders.
AUTHOR: Devry W. E.
CORPORATE SOURCE: Rohm and Haas Co
SOURCE: Nonwoven Fabrics Forum. 20th Edition, : 54 pages
(June 19-22, 1989).
DOCUMENT TYPE: Journal
LANGUAGE: English
NOTE: ITT Cat. No. TS 1828 .C53 N4 1989.
ABSTRACT: A latex polymer binder can be applied wet to a formed fabric and then dried and cured to provide strength and durability. Latex binders offer low viscosity for ease of application, high molecular weight for toughness, binder variety and versatility, low costs, and economy of use. Binder factors influencing nonwoven fabric performance include backbone composition, functional groups, molecular weight, surfactant, and process. Ingredients commonly found in a latex binder bath include defoamers, wetting agents, catalysts, crosslinking agents, thickeners, colorants, flame retardants, water repellents, antistatic agents, sewing aids, optical brighteners, and fillers. CLASSIFICATION CODE: D FINISHING
SUBJECT HEADING: 3820 POLYMERS AND POLYMERIZATION: antistatic agents, applying, binders, catalysts, chemistry, conference papers, crosslinking, defoamers, flameproofing agents, formulations, latexes, nonwoven fabric manufacture, Nonwoven Fabrics Forum. 20th Edition, optical brighteners, performance, repellents, retardants, thickeners, water repellents, wetting agents
CONTROLLED TERM: ANTISTATIC AGENTS; APPLYING; BATHS; BINDERS; CATALYSTS; CHEMICAL AIDS TO PROCESSING; COLOR; COMPOSITION; CONFERENCE PAPERS; COSTS; CROSSLINKING; DIAGRAMS; DURABILITY; FABRICS; FLAME RESISTANCE; FLAMEPROOFING; FLAMEPROOFING AGENTS; FORMULATIONS; FUNCTIONAL GROUPS; GRAPHS CHARTS; LATEXES; LOCATION FUNCTIONAL GROUPS; MOLECULAR WEIGHT; NONWOVEN FABRIC

MANUFACTURE; NONWOVEN FABRICS
; OPTICAL BRIGHTENERS; PERFORMANCE;
POLYMERIZATION; POLYMERS; REPELLENTS;
RETARDANTS; SEWING; STRENGTH OF MATERIALS;
SURFACTANTS; THICKENERS; TOUGHNESS; VISCOSITY;
WATER; WATER REPELLENTS; WATER RESISTANCE;
WEIGHT; WETTING; WETTING AGENTS

L57 ANSWER 18 OF 23 JAPIO (C) 2007 JPO on STN
ACCESSION NUMBER: 1988-224763 JAPIO Full-text
TITLE: FLOCKING METHOD
INVENTOR: IKEDA YOSHIHIRO; TOGO MASAYUKI
PATENT ASSIGNEE(S): TORAY IND INC
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 63224763	A	19880919	Showa	B05D001-14

APPLICATION INFORMATION
STN FORMAT: JP 1987-59013 19870316
ORIGINAL: JP62059013 Showa
PRIORITY APPLN. INFO.: JP 1987-59013 19870316
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1988
INT. PATENT CLASSIF.:
MAIN: B05D001-14
SECONDARY: B32B005-16
ABSTRACT:
PURPOSE: To produce a flocked product having a soft feeding, by using a water- soluble resin having a functional group as the collecting agent for cut piles and using a material obtained by incorporating a curing agent such as a polyglycidyl compound into a water-soluble resin having a functional group as the flock binder.
CONSTITUTION: (A) The fiber bundle collected by the collecting agent consisting of a water-soluble resin having a functional group (e. g., a carboxyl group) or the fiber tread is finely cut to an appropriate length to obtain cut piles. (B) The flock binder obtained by adding a curing agent such as a polyglycidyl compound to a water-soluble resin having a functional group is coated on a base material. (C) The cut piles obtained by the (A) process, the common cut piles not collected by the collecting agent, or the mixture of both piles are separately or simultaneously electrostatically flocked on the substrate coated with the flock binder of the (B) process. (D) Drying, baking, or ageing are carried out to integrally cure the collecting agent and the flock binder by the chemical reaction. (E) The collecting agent is swollen, and then the collected flocked piles are opened.

L57 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1975:429641 HCAPLUS Full-text
DOCUMENT NUMBER: 83:29641
ORIGINAL REFERENCE NO.: 83:4750h,4751a
ENTRY DATE: Entered STN: 12 May 1984
TITLE: Increasing the adhesion of PVC coatings to synthetic fabrics

AUTHOR(S): Repina, N. S.; Nikolaeva, Yu. M.; Shaposhnikova, T. K.; Antchak, V. K.; Il'in, S. N.
CORPORATE SOURCE: USSR
SOURCE: Kozhevenno-Obuvnaya Promyshlennost (1975), 17(3), 57-9
CODEN: KOOPAJ; ISSN: 0023-4354
DOCUMENT TYPE: Journal
LANGUAGE: Russian
CLASSIFICATION: 39-4 (Textiles)
ABSTRACT:
The adhesion of poly(vinyl chloride) [9002-86-2] coatings to polyamide and polyester fibers was increased by addition of TGM-3 [109-16-0] as crosslinking agent. An increase in TGM-3 content of the coating, in the presence of dicumyl peroxide [80-43-3] as polymerization initiator, increased the adhesion of PVC to fibers. A maximum increase in adhesion, observed on addition of 20% TGM-3, indicated a resistance to delamination of polyamide and polyester fibers, 2-2.5 and 1.5-2 fold higher than for fibers without the ***crosslinking*** agents. The increase in adhesion, in the presence of TGM-3 as crosslinking agent, was related to the formation of chemical bonds between the adhesive and the substrate on polymerization of the oligoester acrylate.

SUPPL. TERM: adhesion PVC coating fiber; oligoester acrylate adhesion PVC; crosslinker PVC oligoester acrylate; polyamide fiber adhesion PVC; polyester fiber adhesion PVC
INDEX TERM: Coating materials
(PVC, adhesion of, to fibers, crosslinking with oligoester acrylates in relation to)
INDEX TERM: Polyamide fibers
Polyester fibers
ROLE: PRP (Properties)
(adhesion of, to poly(vinyl chloride) coatings, crosslinking in relation to)
INDEX TERM: Crosslinking agents
(oligoester acrylates, for poly(vinyl chloride) coatings on synthetic fibers)
INDEX TERM: 80-43-3
ROLE: CAT (Catalyst use); USES (Uses)
(catalysts, for polymerization of oligoester acrylates)
INDEX TERM: 9002-86-2
ROLE: USES (Uses)
(coatings, adhesion of, to synthetic fibers, modification with oligoester acrylates in relation to)
INDEX TERM: 109-16-0
ROLE: MOA (Modifier or additive use); USES (Uses)
(crosslinking agents, for poly(vinyl chloride), adhesion to fibers in relation to)

ACCESSION NUMBER: 1974:537446 HCAPLUS Full-text
DOCUMENT NUMBER: 81:137446
ORIGINAL REFERENCE NO.: 81:21623a,21626a
ENTRY DATE: Entered STN: 12 May 1984
TITLE: Properties of crosslinked fibers consisting of copolymers of acrylonitrile with vinyl chloride and vinylidene chloride
AUTHOR(S): Levites, L. M.; Khudoshev, I. F.; Kudryavtsev, G. I.; Gabrielyan, G. A.; Rogovin, Z. A.
CORPORATE SOURCE: Vses. Nauchno-Issled. Inst. Iskusstv. Volokna, Mytishchi, USSR
SOURCE: Khimicheskie Volokna (1974), (2), 54-6
CODEN: KVLKA4; ISSN: 0023-1118
DOCUMENT TYPE: Journal
LANGUAGE: Russian
CLASSIFICATION: 39-2 (Textiles)
ABSTRACT:
Cross-linked fibers with increased thermal stability and Young's modulus were prepared by modified of Saniv (acrylonitrile-vinylidene chloride copolymer)(I) [9010-76-8] and Dynel (acrylonitrile-vinyl chloride copolymer)(II) [9003-00-3] fiber with aqueous ammonium sulfide [9080-17-5]. The tensile strength of I decreased gradually with increased compression, whereas that of II did not change. The resistance to double flex increased for I 1.5-24 whereas
for II it decreased on prolonged treatment. The d. of II fibers increased due to formation of sulfide and disulfide bonds, while crosslinking of I was due to double bond destruction which caused the substantial losing of the vinyl structure. The curves of isometric heating of modified fibers showed a shift of strain maximum to higher temps. which indicated the formation of intermolecular ***chemical*** bonds, and an increase in maximum was observed with increasing S amts in the fiber.

SUPPL. TERM: acrylic fiber crosslinking sulfide; sulfide ammonium crosslinking fiber; Dynel crosslinking mech property
INDEX TERM: Crosslinking agents
(ammonium sulfide, for acrylic fibers)
INDEX TERM: Acrylic fibers
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking of, by ammonium sulfide, mech. properties in relation to)
INDEX TERM: Crosslinking
(of acrylic fibers, mech. properties in relation to)
INDEX TERM: 9080-17-5
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking by, of acrylic fibers, mech. properties in relation to)
INDEX TERM: 9003-00-3 9010-76-8
ROLE: USES (Uses)
(fiber, crosslinking of, by ammonium sulfide)

L57 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:96727 HCAPLUS Full-text
DOCUMENT NUMBER: 68:96727
ORIGINAL REFERENCE NO.: 68:18698h,18699a

ENTRY DATE: Entered STN: 12 May 1984
TITLE: Application of mechanisms for wet and dry wrinkle recovery to fabric exhibiting the unusual combination of high dry and low wet recovery
AUTHOR(S): Harper, Robert J., Jr.; Bruno, Joseph S.; Reeves, Wilson A.
CORPORATE SOURCE: Southern Reg. Res. Lab., New Orleans, LA, USA
SOURCE: Textile Research Journal (1968), 38(3), 292-304
CODEN: TRJOA9; ISSN: 0040-5175
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 39 (Textiles)
ABSTRACT:

Cotton fabrics are treated with polyethylene glycol (I) and dimethyloldihydroxyethyleneurea (II) in a conventional pad-dry-cure process to give very high dry wrinkle recovery and very low wet recovery ***fabrics.*** Thus, desized, scoured, and bleached fabrics were treated with a mixture of 8.1% II, 3% modified Zn(NO3)2 catalyst X-4, and 15% I (mol. weight 600), dried 10 min. at 60°, and cured 15 min. at 130°. The break strength, elongation at break, tensile recovery, % weight loss, moisture regain, and water imbibition for the treated fabrics were determined and compared with 6 cotton samples treated differently as follows: 8.1% II, 3% X-4, 15% I (mol. weight 4000); 8.1% II and 3% X-4; 5% dimethylolethyleneurea (III), 3% Zn(NO3)2.6H2O; untreated; Form W (19.5% HCl and 7.4% HCHO) (23 min.); and Form W (120 min.). High-mol.-weight I did not penetrate the fibers as well as those of low-mol.-weight (.apprx.600). The crosslinking mechanism for wrinkle recovery, which takes into consideration covalent and H-bond crosslinks and the location of the crosslinks in the ***fiber*** , holds fairly well for II-modified cotton. The ***fabric*** exhibited a very low degree of permanent set and had imbibition values equivalent to those treated with II and X-4 only (HD-HW, high dry-high wet recovery). The fibers from the ***fabrics*** were insol. in cuene, indicating covalent ***bond*** crosslinks; the lamellae did not sep. when treated with Me methacrylate. The fibers exhibited a high degree of brittleness in the dry state, which is in agreement with permanent set and low elongation values. This was confirmed by electron micrographs and scanning electromicrographs of abraded fiber ends. Breaking strength of I-modified fabric was higher than HD-HW fabric due to increased mol. orientation and H bonding. Mercerization had a pronounced effect on the relative values of dry and wet wrinkle recovery, and dry and wet fabric stiffness. With mercerized fabric, I in the same cross-linking formulations used on unmercerized fabric produced ***fabric*** with high dry and wet wrinkle recovery with wet stiffness less than dry stiffness. Methylated methylolmelamine and methylolated carbamates were also used as crosslinking agents.

SUPPL. TERM: POLYETHYLENE GLYCOLS; WET WRINKLE RECOVERY COTTON; WRINKLE RECOVERY COTTON FABRIC; DRY WRINKLE RECOVERY COTTON; DIMETHYLOLDIHYDROXYETHYLENEUREA; COTTON FABRIC WRINKLE RECOVERY

INDEX TERM: Textiles
(creaseproofing cotton, with high dry and low wet recovery, with polyethylene glycols as modifying agents and hydroxymethyl nitrogen compds. as crosslinking agents)
INDEX TERM: Crosslinking
(of cotton textiles modified by polyethylene glycols with hydroxymethylated nitrogen compds.)
INDEX TERM: Creaseproofing
(with recovery high in dry state and low in wet state, with polyethylene glycols as modifying agents and hydroxymethyl nitrogen compds. as crosslinking agents)
INDEX TERM: Carbamic acid, (hydroxymethyl)
ROLE: USES (Uses)
(textile wrinkleproofing by polyethylene glycols and)
INDEX TERM: 25322-68-3
ROLE: USES (Uses)
(textile creaseproofing with dimethylolethyleneurea or other crosslinking agent and)
INDEX TERM: 108-78-1D, Melamine, (hydroxymethyl) methylated
136-84-5 1854-26-8
ROLE: USES (Uses)
(textile wrinkleproofing by polyethylene glycols and)

L57 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1962:25964 HCAPLUS Full-text
DOCUMENT NUMBER: 56:25964
ORIGINAL REFERENCE NO.: 56:4990c-e
ENTRY DATE: Entered STN: 22 Apr 2001
TITLE: Finishing agents based on ethylenimine derivatives
AUTHOR(S): Blinov, V. A.
SOURCE: Tekstil'naya Promyshlennost (Moscow, Russian Federation) (1961), 21(No. 7), 64-6
CODEN: TTLPA2; ISSN: 0040-2397
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
CLASSIFICATION: 48 (Textiles)
ABSTRACT:
Ethylenimine derivs. become chemical bonded to OH ***groups*** of textile fibers (forming simple ether bonds) and impart hydrophobic properties or act as softeners, fixing agents for dyeings, cross-linking ***agents*** for cellulosic fibers, anti-degradation agents for sulfur black dyeings, etc. Ethylenimine is unstable, rather explosive, and toxic. Instead, ethyleneureas (made by treating ethylenimine with iso-cyanates), amides (made by reaction of ethylenimine with organic and inorg. acid chlorides) are used. Of practical interest to ***textile*** finishers are: H2O suspensions of octadecylethyleneurea (softener); stearic acid ethyleneamide (softener); phosphoric acid tris(ethyleneamide) (fixing agent for acid dyes); carbonic acid bis(ethyleneamide) (fixing agent for direct and acid dyes and auxiliary

product in color photography). As cross-linking ***agents*** for nonshrinking and noncreasing finishes the following are used: hexamethylenediethylurea, 2,4,6-tris(ethylenimino)-1,3,5-triazine, diethyleneureas of benzene derivs., etc. These agents can also
be used for spin-modifying viscose fibers.

INDEX TERM: Bonds
(cross-linkage formation, in OH-containing textiles by ethylenimine derivs.)
INDEX TERM: Dyeing
(degradation inhibitors and fixing agents for, ethylenimine derivs.)
INDEX TERM: Textiles
(finishes for, from ethylenimine derivs.)
INDEX TERM: Textiles
(finishing of cotton, with acrylic acid-methacrylic
acid or vinyl chloride-vinylidene chloride polymers
and cellulose-NaOH-ZnO solution)
INDEX TERM: Creaseproofing
(with ethylenimine derivs.)

L57 ANSWER 23 OF 23 JAPIO (C) 2007 JPO on STN
ACCESSION NUMBER: 2000-026147 JAPIO Full-text
TITLE: ARTIFICIAL MARBLE
INVENTOR: NAKAI TAKASHI; TAGAWA KIYOMI; ASAJI MASAHIRO
PATENT ASSIGNEE(S): MATSUSHITA ELECTRIC WORKS LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2000026147	A	20000125	Heisei	C04B026-00

APPLICATION INFORMATION
STN FORMAT: JP 1998-192025 19980707
ORIGINAL: JP10192025 Heisei
PRIORITY APPLN. INFO.: JP 1998-192025 19980707
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2000
INT. PATENT CLASSIF.:
MAIN: C04B026-00
SECONDARY: C04B022-04; C08K003-08; C08K003-32; C08L101-00
ADDITIONAL: A01N059-16
ABSTRACT:
PROBLEM TO BE SOLVED: To obtain an artificial marble having enhanced light resistance and preventing discoloration due to silver by incorporating a silver-containing inorg. antibacterial agent obtd. by coordinate-bonding silver to an inorg. support into a resin cured body so as to suppress the release of silver from the inorganic support.
SOLUTION: About 180-300 pts.weight inorg. filler is added to 100 pts.weight resin so as to enhance the heat resistance of the resin, a curing agent and a silver- containing inorg. antibacterial agent as well as additives such as a viscosity reducing agent, glass fibers and a colorant are further added and they are pressed and heated at about 60-100°C to obtain the objective artificial marble containing the silver-containing

antibacterial agent in a resin cured body. The antibacterial agent is prepared by chemically and tightly bonding silver to an inorg. support, preferably calcium phosphate by coordinate bond. Since the silver is hardly released from the inorg. support, it is not discharged into the resin cured body by exchange for other metal in the resin and the additives. When the antibacterial agent is incorporated into the artificial marble by about 0.1-10 weight%, the antibacterial property of the artificial marble can be effectively enhanced.

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